

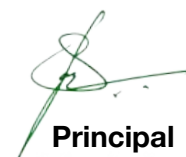
DW Clarification for 1.2.1**Number of Certificate or Value Added Courses****Question Papers as Proof for Assessment Method**

(Enclosed in the below given order)

S.No	Name of Certificate/Value Added Course	Academic Year
1	Certificate Program on Cyber Security	2023-24
2	Training Program on Project Management	2023-24
3	Certificate Program on Video Analytics	2023-24
4	Bridge Course on Fundamentals of Programming	2023-24
5	Bridge Course on Fundamentals of Statistics	2023-24
6	Certificate Program on DataScience and BigData Analytics	2023-24
7	Certificate Program on Start-Up Marketing	2023-24
8	Certificate Program on AI and ML in Business	2023-24
9	Training Program on IT Fundamentals	2023-24
10	Training Program on Django	2023-24
11	Certificate Program on Leadership Development	2023-24
12	Certificate Program on Entrepreneurial Strategic Management	2023-24
13	Certificate Program on Investment Risk Management	2022-23
14	Certificate Program on Python for IoT	2022-23
15	Bridge Course on Fundamentals of Statistics	2022-23
16	Certificate Program on Ethical Hacking	2022-23
17	Training Program on Digital Tools for Business	2022-23
18	Certificate Program on Financial Modeling	2022-23
19	Bridge Course on Fundamentals of Programming	2022-23
20	Certificate Program on Google Cloud	2022-23
21	Training Program on Data Analytics	2022-23
22	Certificate Program on Business Analytics and DataScience	2022-23
23	Training Program on Generative AI	2022-23
24	Certificate Program on Agile Project Management	2021-22

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S.No	Name of Certificate/Value Added Course	Academic Year
25	Bridge Course on Fundamentals of Statistics	2021-22
26	Certificate Program on HR Analytics	2021-22
27	Bridge Course on Fundamentals of Programming	2021-22
28	Certificate Program on Cloud Computing and Virtualization	2021-22
29	Certificate Program on Corporate Governance	2021-22
30	Training Program on Chatbots	2021-22
31	Certificate Program on Quantum Computing and Quantum Programming	2021-22
32	Training Program on DataScience with Python	2021-22
33	Certificate Program on Mobile App Development	2020-21
34	Certificate Program on Cloud Computing and DevOPS	2020-21
35	Bridge Course on Fundamentals of Statistics	2020-21
36	Bridge Course on Fundamentals of Programming	2020-21
37	Certificate Program on Enterprise Resource Planning	2020-21
38	Certificate Program on Augmented Reality and Virtual Reality	2020-21
39	Certificate Program on Leadership in the Digital Age	2019-20
40	Certificate Program on Natural Language Processing	2019-20
41	Training Program on Finance and Accounting	2019-20
42	Training Program on SQL and Database Design	2019-20
43	Certificate Program on Design Thinking and Innovation	2019-20
44	Certificate Program on Human Resources	2019-20
45	Certificate Program on BlockChain and Cryptocurrency	2019-20




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1.2.1. Certificate/Value Added Courses

Question Paper

1. Certificate Program on Cyber Security


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC210	Certificate Program on Cyber security		Max Marks:50	Time: 1 Hr

Date :13.10.2023


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What does cybersecurity primarily aim to protect?** []
A. Hardware
B. Software
C. Data
D. Internet Speed
2. **Which term refers to the practice of protecting networks, systems, and programs from digital attacks?** []
A. Digital Defense
B. Encryption
C. Data Integrity
D. Cybersecurity
3. **Why is cybersecurity important in modern society?** []
A. It boosts internet speed.
B. It prevents data breaches and ensures privacy.
C. It stops hardware failures.
D. It reduces software bugs.
4. **Which of the following is NOT a type of cyber threat?** []
A. Phishing
B. Debugging
C. Ransomware
D. Malware
5. **What is the purpose of vulnerability assessment?** []
A. Identify weaknesses in systems.
B. Install antivirus software.
C. Speed up internet connections.
D. Train employees.


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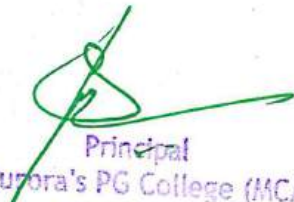
6. **What is risk management in cybersecurity?** []
A. Conducting legal audits.
B. Enhancing system performance.
C. Developing encryption keys.
D. Analyzing and mitigating potential threats.
7. **What is the main purpose of a firewall?** []
A. Block unauthorized access to a network.
B. Enhance system speed.
C. Store encryption keys.
D. Identify phishing attempts.
8. **Which technology helps detect unauthorized intrusions?** []
A. VPN
B. Encryption Software
C. Cloud Backup
D. Intrusion Detection System (IDS)
9. **What does network segmentation achieve?** []
A. Increases bandwidth.
B. Limits access to specific areas of a network.
C. Strengthens encryption protocols.
D. Enhances software debugging.
10. **What is a key difference between symmetric and asymmetric encryption?** []
A. Symmetric encryption uses two keys.
B. Asymmetric encryption uses one key.
C. Symmetric uses one key, asymmetric uses two.
D. Asymmetric is less secure.
11. **What is the purpose of hashing in cybersecurity?** []
A. Create firewalls.
B. Encrypt messages.
C. Authenticate users.
D. Ensure data integrity.
12. **What is a digital signature primarily used for?** []
A. Verify the authenticity of a message.
B. Encrypt sensitive data.
C. Enhance system speed.
D. Detect intrusions.
13. **Which protocol ensures secure communication over the internet?** []
A. HTTP
B. UDP
C. FTP
D. TLS


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14. **What is a primary use of a VPN?** []
A. Increase internet speed.
B. Encrypt internet traffic and protect privacy.
C. Prevent malware attacks.
D. Create backups.
15. **What does PKI stand for?** []
A. Public Key Identifier
B. Protocol Key Identification
C. Private Key Integration
D. Public Key Infrastructure
16. **Which is an example of multi-factor authentication?** []
A. Password only
B. Biometrics only
C. Password + SMS code
D. Username only
17. **What does Role-Based Access Control (RBAC) define?** []
A. Encryption methods
B. Permissions based on job roles
C. Firewall configurations
D. Network speeds
18. **IAM stands for:** []
A. Internal Access Management
B. Intrusion Access Monitor
C. Identity and Access Management
D. Information Authentication Model
19. **Which vulnerability involves injecting malicious SQL statements?** []
A. Cross-Site Scripting
B. SQL Injection
C. Buffer Overflow
D. Malware
20. **What is the role of a Web Application Firewall (WAF)?** []
A. Protect web applications from attacks.
B. Encrypt user data.
C. Detect phishing attempts.
D. Improve website speed.
21. **Which of the following is NOT a secure coding practice?** []
A. Input validation
B. Parameterized queries
C. Hardcoding sensitive data
D. Error handling


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22. **What is the first step in incident response?** []
A. Containment
B. Recovery
C. Detection
D. Post-incident analysis
23. **What is the purpose of post-incident analysis?** []
A. Speed up system recovery.
B. Understand and prevent future incidents.
C. Enhance encryption protocols.
D. Conduct risk assessments.
24. **What does containment involve during an incident response?** []
A. Isolating affected systems to prevent spread.
B. Recovering lost data.
C. Identifying vulnerabilities.
D. Updating security policies.
25. **Which regulation focuses on data protection in the EU?** []
A. HIPAA
B. GDPR
C. CCPA
D. PCI-DSS
26. **What is the primary goal of compliance auditing?** []
A. Enhance network speed.
B. Prevent malware attacks.
C. Ensure adherence to regulations.
D. Detect phishing attempts.
27. **What does CCPA stand for?** []
A. California Cybersecurity Protection Act
B. California Consumer Privacy Act
C. Cyber Crime Prevention Agency
D. Consumer Cybersecurity Act
28. **What does APT stand for?** []
A. Application Persistent Technology
B. Advanced Prevention Tactics
C. Advanced Persistent Threats
D. Application Protection Tools
29. **What is a key challenge in IoT security?** []
A. Limited bandwidth
B. Lack of standardization
C. High power consumption
D. Software bugs


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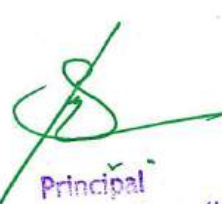
30. Which of these is an emerging trend in cybersecurity? []
A. Decline in malware attacks
B. Reduction in compliance requirements
C. Cloud security advancements
D. Elimination of phishing attempts
31. Which of the following is a fundamental objective of cybersecurity? []
A. Protecting the confidentiality, integrity, and availability of information
B. Improving software development speed
C. Reducing hardware costs
D. Increasing internet speed
32. What does the CIA triad stand for in cybersecurity? []
A. Cybersecurity, Infrastructure, Access
B. Confidentiality, Integration, Authorization
C. Confidentiality, Integrity, Availability
D. Control, Information, Analytics
33. What is phishing? []
A. Encrypting data to prevent unauthorized access
B. Tricking users into providing sensitive information
C. An advanced encryption method
D. Blocking malicious traffic
34. Which term describes software that secretly gathers user information?[]
A. Ransomware
B. Worms
C. Spyware
D. Adware
35. What is a zero-day vulnerability? []
A. A threat with no known solution
B. A software flaw exploited before being fixed
C. A virus targeting operating systems
D. A type of firewall
36. Which type of network attack involves overwhelming a system with traffic? []
A. Data Breach
B. SQL Injection
C. Keylogging
D. Distributed Denial of Service (DDoS)
37. What is the main purpose of access control in network security? []
A. Encrypt user communications
B. Speed up data transfers
C. Restrict access to authorized users only
D. Detect malware attacks


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38. Which device monitors and controls incoming and outgoing network traffic? []
- A. VPN
 - B. Firewall
 - C. Web Server
 - D. Load Balancer
39. Which encryption technique is used to verify data authenticity and integrity? []
- A. Symmetric Encryption
 - B. Asymmetric Encryption
 - C. Hashing
 - D. Compression
40. What is a key advantage of asymmetric encryption over symmetric encryption? []
- A. Faster encryption speed
 - B. No need to share a secret key
 - C. Better for small data sets
 - D. Requires less computational power
41. What does a cryptographic key pair consist of? []
- A. Two symmetric keys
 - B. A public key and a private key
 - C. A hashed value and a key
 - D. Two digital signatures
42. What is the primary role of Secure Sockets Layer (SSL)? []
- A. Encrypt communications between web servers and browsers.
 - B. Prevent phishing attacks.
 - C. Improve network speed.
 - D. Secure IoT devices.
43. Which protocol is a modern replacement for SSL? []
- A. IPsec
 - B. HTTP
 - C. TLS
 - D. FTP
44. What type of network does a VPN create? []
- A. Public and unencrypted
 - B. Private and encrypted
 - C. Local and limited
 - D. Open and accessible
45. What is an example of biometric authentication? []
- A. Username and password
 - B. Security tokens
 - C. Fingerprint scanning
 - D. CAPTCHA


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46. Which access control model is the most restrictive? []
- A. Discretionary Access Control (DAC)
 - B. Mandatory Access Control (MAC)
 - C. Role-Based Access Control (RBAC)
 - D. Attribute-Based Access Control (ABAC)
47. Multi-factor authentication (MFA) requires: []
- A. A single password
 - B. An encryption key only
 - C. Two or more forms of verification
 - D. A firewall
48. What does Cross-Site Scripting (XSS) allow attackers to do? []
- A. Inject malicious scripts into web pages
 - B. Encrypt sensitive data
 - C. Execute SQL commands on a database
 - D. Crash a server
49. What is the best way to prevent SQL injection? []
- A. Avoid using databases
 - B. Encrypt all queries
 - C. Use parameterized queries
 - D. Implement firewalls
50. What is the main goal of secure coding practices? []
- A. Reduce vulnerabilities in software
 - B. Improve software performance
 - C. Simplify application development
 - D. Increase network speed



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1.2.1. Certificate/Value Added Courses

Question Paper

2. Training Program on Project Management

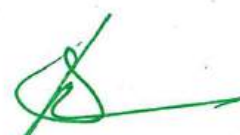
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	TMB204	Training Program on Project Management		Max Marks:50	Time: 1 Hr

Date :19.10.2023

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	


**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

1. Which phase is typically the first in the project lifecycle? []
a) Execution
b) Planning
c) Initiation
d) Closure
2. What is the primary responsibility of a project manager? []
a) Designing software solutions
b) Coordinating and leading the project team
c) Approving budgets
d) Performing technical tasks
3. Which is not a recognized project management concept? []
a) Infinite timeline
b) Triple constraint
c) Stakeholder engagement
d) Risk analysis
4. The project scope primarily defines: []
a) Budget constraints
b) The work required to achieve project objectives
c) Risk mitigation strategies
d) Team roles
5. What is a stakeholder? []
a) Anyone who has an interest or impact on the project
b) Only the project team members
c) Financial contributors
d) External regulators



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6. **A project charter includes:** []
a) A detailed schedule
b) A finalized budget
c) A summary of the project objectives
d) Team member roles
7. **What does WBS stand for?** []
a) Weekly Briefing Summary
b) Work Budget System
c) Workforce Balance Strategy
d) Work Breakdown Structure
8. **A Gantt chart is primarily used for:** []
a) Scheduling project tasks
b) Managing project risks
c) Identifying stakeholders
d) Drafting project charters
9. **What is resource allocation?** []
a) Assigning risks to team members
b) Organizing meetings
c) Assigning available resources to tasks
d) Preparing the project charter
10. **What is the first step in risk management?** []
a) Mitigation planning
b) Identifying potential risks
c) Budgeting for contingencies
d) Reporting
11. **Which is a risk mitigation strategy?** []
a) Avoidance
b) Transfer
c) Reduction
d) All of the above
12. **A risk management plan includes:** []
a) Only risks with financial impacts
b) Stakeholder identification
c) Strategies for addressing identified risks
d) Team-building exercises
13. **What is the most critical aspect of leading a project team?** []
a) Budget control
b) Stakeholder updates
c) Effective communication
d) Final reporting


- 14. Quality assurance involves:** []
- a) Ensuring processes meet defined standards
 - b) Fixing defective deliverables
 - c) Allocating resources
 - d) Writing final reports
- 15. A project manager ensures resources are:** []
- a) Always available on request
 - b) Used effectively to achieve objectives
 - c) Directly controlled by the client
 - d) Allocated equally across all tasks
- 16. KPIs stand for:** []
- a) Key Project Indicators
 - b) Key Performance Indicators
 - c) Key Process Initiatives
 - d) Known Process Improvements
- 17. Change management focuses on:** []
- a) Managing adjustments to project scope, time, or budget
 - b) Removing risks
 - c) Eliminating unnecessary tasks
 - d) Assigning additional resources
- 18. Progress tracking primarily involves:** []
- a) Documenting lessons learned
 - b) Comparing actual performance to planned milestones
 - c) Writing charters
 - d) Stakeholder communication
- 19. The final step in project closure is:** []
- a) Stakeholder identification
 - b) Progress tracking
 - c) Documenting lessons learned
 - d) Risk identification
- 20. What is the purpose of a retrospective?** []
- a) Resource allocation
 - b) Reviewing successes and areas for improvement
 - c) Planning deliverables
 - d) Scheduling meetings
- 21. Final deliverables should be:** []
- a) Reviewed and accepted by stakeholders
 - b) Filed for documentation only
 - c) Used for quality assurance
 - d) Ignored in case of unresolved issues


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- 22. Scrum and Kanban are examples of:** []
- a) Risk management tools
 - b) Scheduling techniques
 - c) Agile methodologies
 - d) Budgeting frameworks
- 23. Agile prioritizes:** []
- a) Flexibility and iterative development
 - b) Rigid schedules
 - c) Detailed charters
 - d) Avoiding stakeholder input
- 24. What is a challenge of Agile project management?** []
- a) Detailed planning
 - b) Lack of stakeholders
 - c) Fixed timelines
 - d) Resistance to change from traditional methods
- 25. Which is a widely used project management tool?** []
- a) Excel
 - b) MS Project
 - c) AutoCAD
 - d) SQL Server
- 26. Collaboration tools such as Trello and Asana help teams:** []
- a) Share updates and manage tasks
 - b) Conduct retrospectives
 - c) Finalize deliverables
 - d) Identify risks
- 27. progress is easiest with:** []
- Tracking**
- a) Agile principles
 - b) Dedicated software tools
 - c) Financial reports
 - d) Gantt charts
- 28. Studying failed projects helps:** []
- a) Avoid similar mistakes in future projects
 - b) Improve resource allocation
 - c) Reduce risk documentation
 - d) Increase team size
- 29. Real-world scenarios are used to:** []
- a) Remove Agile practices
 - b) Simplify charters
 - c) Provide practical learning and insights
 - d) Replace lessons learned

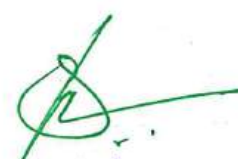

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30. A personal project management toolkit includes: []
- a) Risk management plans
 - b) Only Agile practices
 - c) Stakeholder lists
 - d) Techniques, tools, and templates suited to the manager
31. The triple constraint in project management includes: []
- a) Time, cost, and scope
 - b) Quality, stakeholders, and risk
 - c) Budget, resources, and timeline
 - d) Tasks, milestones, and deliverables
32. A project is defined as: []
- a) An ongoing process
 - b) A routine operational task
 - c) A temporary endeavor to achieve specific objectives
 - d) A task assigned to a single team member
33. The project charter is typically approved by: []
- a) The project sponsor
 - b) The project manager
 - c) The entire team
 - d) The stakeholders
34. Stakeholder engagement primarily involves: []
- a) Assigning tasks to stakeholders
 - b) Risk management
 - c) Preparing financial reports
 - d) Involving stakeholders in decision-making processes
35. A critical path in a project schedule represents: []
- a) The path with the least number of tasks
 - b) The sequence of tasks that determines the project duration
 - c) Optional tasks
 - d) Non-dependent milestones
36. Resource leveling is a technique to: []
- a) Reduce project risks
 - b) Improve communication
 - c) Balance resource demand and availability
 - d) Manage stakeholder expectations
37. Which of these is not a type of project risk? []
- a) Financial risk
 - b) Operational risk
 - c) Guaranteed risk
 - d) Strategic risk


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- 38. What is the purpose of a risk register?** []
- a) To document only the resolved risks
 - b) To identify, analyze, and monitor project risks
 - c) To allocate resources
 - d) To assign stakeholders
- 39. Conflict in project teams is best managed by:** []
- a) Open communication and active listening
 - b) Ignoring the issue
 - c) Assigning blame
 - d) Rescheduling tasks
- 40. Quality control focuses on:** []
- a) Planning processes
 - b) Creating charters
 - c) Inspecting deliverables for defects
 - d) Scheduling
- 41. Variance analysis helps to:** []
- a) Identify differences between planned and actual performance
 - b) Allocate additional resources
 - c) Approve project charters
 - d) Design a project timeline
- 42. Which tool is commonly used to monitor KPIs?** []
- a) Gantt charts
 - b) Risk registers
 - c) Charters
 - d) Dashboards
- 43. Lessons learned sessions help teams to:** []
- a) Identify risks
 - b) Improve future project performance
 - c) Manage budgets
 - d) Design WBS
- 44. A successful project closure involves:** []
- a) Canceling pending tasks
 - b) Finalizing stakeholder engagement
 - c) Delivering agreed outputs to stakeholders
 - d) Revising the charter
- 45. In Scrum, a sprint typically lasts:** []
- a) 1 day
 - b) 1 year
 - c) 3 months
 - d) 1-4 weeks

- 46. Kanban focuses on:** []
- a) Fixed deadlines
 - b) Risk mitigation
 - c) Visualizing workflow and limiting work in progress
 - d) Creating Gantt charts
- 47. MS Project is primarily used for:** []
- a) Stakeholder management
 - b) Scheduling and tracking tasks
 - c) Risk mitigation
 - d) Conflict resolution
- 48. Trello organizes tasks using:** []
- a) Boards, lists, and cards
 - b) Gantt timelines
 - c) Charts
 - d) Dashboards
- 49. Learning from failed projects helps to:** []
- a) Avoid stakeholders in future projects
 - b) Ignore planning phases
 - c) Identify weak areas in project management processes
 - d) Reduce team size
- 50. Best practices in project management involve:** []
- a) Adopting a single rigid methodology
 - b) Ignoring risks
 - c) Excluding stakeholders from reviews
 - d) Tailoring approaches to the specific project needs



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1.2.1. Certificate/Value Added Courses

Question Paper

3. Certificate Program on Video Analytics

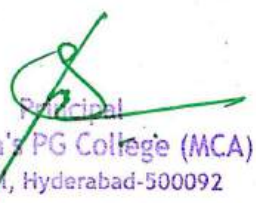
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB208	Certificate Program on Video Analytics	Max Marks:50	Time: 1 Hr	

Date :25.11.2023

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

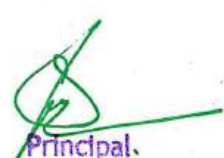
1. **What is video analytics primarily used for?** []
 - a) Enhancing video quality
 - b) Extracting useful insights from video data
 - c) Compressing video files
 - d) Editing video content
2. **Which of the following is NOT a key term in video analytics?** []
 - a) Frame
 - b) ROI (Region of Interest)
 - c) Augmented Reality
 - d) Object Detection
3. **One major application of video analytics is:** []
 - a) Medical imaging
 - b) Autonomous vehicles
 - c) Spreadsheet management
 - d) Database indexing
4. **Video analytics relies heavily on:** []
 - a) Manual coding
 - b) Visual effects software
 - c) Artificial intelligence and machine learning
 - d) Mechanical components
5. **Which industry benefits the most from behavior analysis in video analytics?** []
 - a) Agriculture
 - b) Banking
 - c) Security and surveillance
 - d) Education
6. **What is a common video data format?** []
 - a) PNG
 - b) MP4
 - c) DOCX
 - d) JSON


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7. Which preprocessing technique involves adjusting pixel values to a standard range? []
a) Noise reduction
b) Normalization
c) Feature extraction
d) Compression
8. Noise in video analytics refers to: []
a) Loud background sounds
b) Unwanted visual data or distortions
c) Missing frames in the video
d) Extra features added in post-processing
9. Which technology is commonly used for video capture in video analytics systems? []
a) GPS
b) LiDAR
c) CCTV cameras
d) Fiber optics
10. Why is preprocessing necessary in video analytics? []
a) To add animations
b) To enhance computational efficiency and improve results
c) To save storage space
d) To reduce video resolution
11. Which algorithm is known for real-time object detection? []
a) YOLO
b) SVM
c) K-Means
d) PCA
12. Faster R-CNN is an advancement over R-CNN because it: []
a) Processes multiple images at once
b) Uses a region proposal network (RPN) for faster computation
c) Eliminates the need for GPUs
d) Only detects stationary objects
13. What does SSD stand for in object detection? []
a) Single Shot Detector
b) Smart Sensor Device
c) Secure Storage Device
d) Simplified Signal Detection
14. Which object detection technique is best suited for detecting small objects in images? []
a) YOLO
b) SSD
c) Faster R-CNN
d) All of the above
15. One key challenge of object detection is: []
a) Limited algorithms available
b) Handling variations in lighting and angles
c) Lack of demand for the technology
d) High cost of hardware

16. **The Kalman Filter is primarily used for:** []
a) Object tracking
b) Image enhancement
c) Data compression
d) Video rendering
17. **DeepSORT enhances SORT by using:** []
a) Motion models
b) Deep learning for re-identification
c) Faster computation methods
d) GPS tracking
18. **Object tracking algorithms aim to:** []
a) Create static images from video
b) Predict the location of an object over time
c) Reduce file size
d) Improve audio quality
19. **Which is NOT a common challenge in object tracking?** []
a) Occlusion
b) Appearance change of objects
c) Object re-identification
d) Video file conversion
20. **SORT stands for:** []
a) Simple Online and Real-Time Tracking
b) Smart Object Re-identification Technique
c) Secure Online Recognition Tool
d) Sequential Object Recognition Tool
21. **Behavior analysis focuses on:** []
a) Identifying and interpreting patterns in movement or actions
b) Enhancing video resolution
c) Analyzing audio data
d) Creating video simulations
22. **Temporal models are primarily used for:** []
a) Spatial analysis
b) Activity recognition in time sequences
c) Noise removal
d) Object resizing
23. **Which of the following is an example of activity recognition?** []
a) Recognizing objects in a frame
b) Identifying a person walking in a video
c) Storing video metadata
d) Enhancing colors in video frames
24. **One challenge in behavior analysis is:** []
a) Limited computational tools
b) Variability in human actions
c) Lack of video data
d) Low-resolution videos

25. **Which method is often used for sequence data in activity recognition?** []
a) RNNs (Recurrent Neural Networks)
b) CNNs (Convolutional Neural Networks)
c) PCA (Principal Component Analysis)
d) GANs (Generative Adversarial Networks)
26. **Facial recognition starts with:** []
a) Matching features with a database
b) Face detection
c) Noise removal
d) Image normalization
27. **What does feature extraction in facial recognition involve?** []
a) Identifying key landmarks on the face
b) Compressing the image size
c) Removing background noise
d) Adding labels to video data
28. **An ethical consideration in facial recognition is:** []
a) Computational complexity
b) Potential privacy violations
c) Lack of application areas
d) Difficulty in data storage
29. **Which technique is used to compare detected faces with stored templates?** []
a) Matching
b) Feature extraction
c) Classification
d) Preprocessing
30. **Which application heavily relies on facial recognition?** []
a) Virtual reality
b) Attendance tracking
c) Video gaming
d) 3D modeling
31. **What is crucial during video analytics system integration?** []
a) High resolution of videos
b) Compatibility with existing infrastructure
c) Expensive hardware
d) Frequent manual intervention
32. **Deployment considerations include:** []
a) Hardware cost only
b) Scalability and performance optimization
c) Software licensing
d) Graphic design
33. **Which factor is key to successful system deployment?** []
a) Real-time analytics
b) Reduce video file size
c) High-end graphical interface
d) Regular manual tuning


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34. **System integration ensures:** []
a) Consistency between video streams and analytics modules
b) Higher video resolution
c) Reduced software costs
d) Automatic database deletion
35. **Which is a best practice in deploying video analytics systems?** []
a) Ignoring privacy concerns
b) Testing for real-world scenarios
c) Avoiding data backup
d) Focusing on single-use applications
36. **Precision measures:** []
a) Accuracy of predictions for all data
b) Ratio of true positive predictions to total positive predictions
c) Total processing time
d) Quality of preprocessing
37. **Which metric combines precision and recall?** []
a) F1 Score
b) Accuracy
c) False Negative Rate
d) IoU (Intersection over Union)
38. **What is a common method for benchmarking?** []
a) Comparing models with established datasets
b) Running a model without validation
c) Randomly guessing predictions
d) Avoiding test data
39. **Recall measures:** []
a) Proportion of correctly identified positive cases out of all actual positives
b) Total number of false negatives
c) Processing speed of algorithms
d) Computational efficiency
40. **A low F1 score suggests:** []
a) High precision and recall
b) Poor balance between precision and recall
c) Inconsistent video data
d) High noise in videos
41. **Real-time video analytics focuses on:** []
a) Offline data storage
b) Instant processing of video streams
c) Video editing
d) Compressing videos for storage
42. **Deep learning in video analytics often uses:** []
a) Convolutional Neural Networks (CNNs)
b) Decision trees
c) K-means clustering
d) Basic heuristics


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43. **An emerging trend in video analytics is:** []
a) Improved mechanical cameras
b) Use of edge computing for reduced latency
c) Manual analysis techniques
d) Elimination of preprocessing steps
44. **Which is a primary use case of video analytics in retail?** []
a) Predicting weather patterns
b) Customer behavior analysis
c) Detecting facial injuries
d) Enhancing 3D modeling
45. **Smart cities use video analytics for:** []
a) Improved lighting systems
b) Traffic management and surveillance
c) Building designs
d) Electricity optimization
46. **What is a benefit of using video analytics in traffic management?** []
a) Generating 3D models
b) Reducing video storage space
c) Monitoring traffic flow and detecting violations
d) Eliminating traffic lights
47. **Which deep learning model is commonly applied to real-time video analysis?** []
a) RNNs
b) GANs
c) LSTMs
d) YOLO
48. **One challenge in applying video analytics in security is:** []
a) Limited video formats
b) High false alarm rates
c) Lack of real-time systems
d) Difficulty in detecting large objects
49. **Behavior analysis in smart cities helps to:** []
a) Reduce the need for surveillance
b) Track anomalies in public behavior patterns
c) Create virtual simulations
d) Lower computational costs
50. **Facial recognition in surveillance is particularly useful for:** []
a) Predicting criminal behavior
b) Identifying individuals in real-time
c) Enhancing image quality
d) Preventing data breaches



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1.2.1. Certificate/Value Added Courses

Question Paper

4. Bridge Course on Fundamentals of Programming

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad		
Course Code	BMC101	Bridge course on Fundamentals of Programming	Max Marks:50	Time: 1 Hr

Date :25.11.2023

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:


1. Which of the following is a high-level programming language? []
 - a) Assembly
 - b) Machine Code
 - c) Binary
 - d) Python

2. What does syntax in programming refer to? []
 - a) The order of hardware components
 - b) The design of an operating system
 - c) The set of rules defining how programs are written
 - d) The performance of the program

3. Which step is essential before writing code? []
 - a) Buying hardware
 - b) Setting up a programming environment
 - c) Learning to use spreadsheets
 - d) Learning advanced algorithms

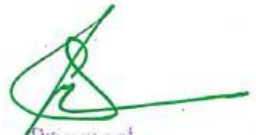
4. Which of these is a primitive data type? []
 - a) Object
 - b) Dictionary
 - c) Array
 - d) Integer

5. What is the purpose of type casting? []
 - a) To convert one data type into another
 - b) To protect data in memory
 - c) To debug code efficiently
 - d) To write comments in the program


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6. What symbol is used to declare a constant in most programming languages? []
a) @
b) \$
c) const
d) var
7. Which of the following is an arithmetic operator? []
a) ==
b) &&
c) +
d) ||
8. What is the result of the expression $5 + 2 * 3$ in most programming languages? []
a) 11
b) 21
c) 15
d) 7
9. Logical operators are used for: []
a) Combining multiple conditions
b) Calculating numeric values
c) Converting data types
d) Debugging programs
10. Which keyword is used for a conditional statement? []
a) case
b) loop
c) repeat
d) if
11. What is the purpose of a for loop? []
a) To execute a block once
b) To repeat a block a fixed number of times
c) To terminate a program
d) To handle exceptions
12. What is an example of a nested control structure? []
a) A loop inside a variable
b) Declaring functions inside a loop
c) An if statement inside a loop
d) Using relational operators
13. What does a function return by default if no return value is specified? []
a) 0
b) -1
c) null
d) void


14. **What is the scope of a variable declared inside a function?** []
- a) Global
 - b) Local
 - c) Static
 - d) Dynamic
15. **Which keyword is used to define a function?** []
- a) let
 - b) loop
 - c) def
 - d) var
16. **An array is:** []
- a) A collection of elements stored at contiguous memory locations
 - b) A single variable
 - c) An unorganized collection of data
 - d) A file system
17. **What is a characteristic of a multi-dimensional array?** []
- a) It contains only strings
 - b) It is faster than single-dimensional arrays
 - c) It uses rows and columns
 - d) It must have exactly two dimensions
18. **Which of the following is not a data structure?** []
- a) String
 - b) List
 - c) Array
 - d) Condition
19. **What is a runtime error?** []
- a) An error in the operating system
 - b) An error that occurs while the program is executing
 - c) An error in variable declaration
 - d) An error before compilation
20. **What is the purpose of a debugger?** []
- a) Writing new code
 - b) Generating reports
 - c) Enhancing application design
 - d) Identifying and fixing errors
21. **Which statement is used to handle exceptions?** []
- a) try-catch
 - b) try-except
 - c) debug-continue
 - d) loop-handle


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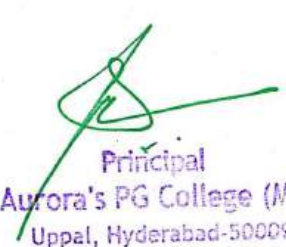
22. What is the key feature of an algorithm? []
- a) Complex design
 - b) Random execution
 - c) A clear set of instructions
 - d) Unlimited steps
23. Which sorting algorithm is based on repeatedly swapping adjacent elements? []
- a) Merge Sort
 - b) Bubble Sort
 - c) Quick Sort
 - d) Binary Sort
24. What is the time complexity of a linear search? []
- a) $O(1)$
 - b) $O(n^2)$
 - c) $O(\log n)$
 - d) $O(n)$
25. What is the primary purpose of project work in programming? []
- a) To apply learned concepts
 - b) To improve operating systems
 - c) To learn new programming languages
 - d) To copy existing solutions
26. How should a project presentation ideally end? []
- a) With code debugging
 - b) With unanswered questions
 - c) With a discussion of solutions
 - d) By rewriting code
27. Integrating programming constructs refers to: []
- a) Combining loops, functions, and structures
 - b) Developing hardware
 - c) Writing standalone instructions
 - d) Avoiding debugging
28. Reviewing concepts is important for: []
- a) Learning new programming languages
 - b) Debugging errors
 - c) Ensuring foundational understanding
 - d) Avoiding algorithm implementation
29. What is an example of an advanced topic? []
- a) Conditional statements
 - b) Machine Learning
 - c) Arithmetic operators
 - d) Debugging tools

30. **Where can a programmer find resources for further learning?** []
a) Only in textbooks
b) From outdated libraries
c) Online courses and documentation
d) From hardware specifications
31. **Which is not a programming paradigm?** []
a) Object-oriented
b) Procedural
c) Functional
d) Algorithmic
32. **What is an IDE in programming?** []
a) Integrated Development Environment
b) Internal Debugging Extension
c) Interactive Data Executor
d) Input Design Editor
33. **A variable that cannot change during the execution of a program is:** []
a) Static
b) Constant
c) Global
d) Dynamic
34. **What will the following code output? print(type(3.14)) (in Python)** []
a) <class 'int'>
b) <class 'str'>
c) <class 'float'>
d) <class 'bool'>
35. **Which of the following has the highest precedence in most programming languages?** []
a) Logical operators
b) Relational operators
c) Arithmetic operators
d) Assignment operators
36. **What is the output of 8 % 3?** []
a) 2
b) 3
c) 1
d) 8
37. **The while loop is best used when:** []
a) Iterations are fixed
b) The condition always evaluates to false
c) Iterations depend on a condition
d) Code should not be executed

38. Which of these statements is valid in most programming languages? []
- a) if (x = 10)
 - b) if (x == 10)
 - c) if x := 10
 - d) if [x = 10]
39. A recursive function is one that: []
- a) Calls another function
 - b) Contains a loop
 - c) Calls itself
 - d) Returns multiple values
40. Which of the following is an invalid function name? []
- a) 2ndFunction
 - b) helper Function
 - c) calculate Sum
 - d) main function
41. Which of the following correctly initializes an array in C++? []
- a) int array = {1, 2, 3};
 - b) int array[] = {1, 2, 3};
 - c) int array[3] = {1, 2, 3};
 - d) array int[3] = {1, 2, 3};
42. How is a string typically represented in C? []
- a) A single character variable
 - b) A pointer
 - c) An integer array
 - d) A character array
43. Which type of error is detected during program execution? []
- a) Syntax error
 - b) Runtime error
 - c) Compilation error
 - d) Logical error
44. What is the purpose of a breakpoint in debugging? []
- a) To pause execution at a specific point
 - b) To improve the program speed
 - c) To terminate the program
 - d) To remove errors automatically
45. Which algorithm is based on divide-and-conquer? []
- a) Bubble Sort
 - b) Linear Search
 - c) Merge Sort
 - d) Selection Sort


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46. Which searching algorithm is efficient for sorted arrays? []
- a) Binary Search
 - b) Linear Search
 - c) Quick Search
 - d) Hash Search
47. When dividing tasks in a project, it is best to: []
- a) Work only on complex features first
 - b) Work without a plan
 - c) Break the project into manageable modules
 - d) Test only after completing the project
48. The key outcome of a programming project is: []
- a) A working program that meets requirements
 - b) Code written without comments
 - c) Using the latest tools
 - d) Completing it faster than planned
49. Which resource is best for advanced programming concepts? []
- a) Beginner tutorials
 - b) Official documentation and research papers
 - c) Random blog posts
 - d) Social media
50. Learning advanced topics like AI and machine learning requires a strong understanding of: []
- a) Debugging only
 - b) Random programming languages
 - c) Basic hardware components
 - d) Basic programming concepts and algorithms



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1.2.1. Certificate/Value Added Courses

Question Paper

5. Bridge Course on Fundamentals of Statistics

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	BMB101	Bridge Course on Fundamentals of Statistics		Max Marks:50	Time: 1 Hr

Date :21.12.2023

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:


1. What is the primary goal of statistics? []
 - a) To manipulate data
 - b) To collect, analyze, and interpret data
 - c) To make data visualizations
 - d) To predict future events

2. Which of the following is qualitative data? []
 - a) Age of students
 - b) Gender of participants
 - c) Height of basketball players
 - d) Exam scores

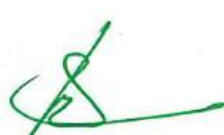
3. Which level of measurement is associated with ordered categories with no meaningful difference between values? []
 - a) Nominal
 - b) Ordinal
 - c) Interval
 - d) Ratio

4. The temperature in Celsius is an example of which level of measurement? []
 - a) Nominal
 - b) Ordinal
 - c) Interval
 - d) Ratio

5. Which of the following is NOT a scope of statistics? []
 - a) Decision-making
 - b) Data collection
 - c) Infinite certainty
 - d) Trend analysis


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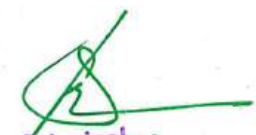
6. **What is the arithmetic average of a dataset called?** []
a) Mode
b) Mean
c) Median
d) Range
7. **What measure divides the dataset into two equal parts?** []
a) Mean
b) Mode
c) Median
d) Standard deviation
8. **Which measure of dispersion represents the difference between the maximum and minimum values?** []
a) Variance
b) Range
c) Standard deviation
d) Interquartile range
9. **What graphical representation is most suitable for categorical data?** []
a) Histogram
b) Scatter plot
c) Bar chart
d) Box plot
10. **A box plot is primarily used to display:** []
a) Frequency distributions
b) Measures of central tendency
c) Data spread and outliers
d) Probabilities
11. **What is the set of all possible outcomes of a random experiment?** []
a) Event
b) Trial
c) Probability space
d) Sample space
12. **If two events cannot occur simultaneously, they are said to be:** []
a) Independent
b) Mutually exclusive
c) Complementary
d) Certain
13. **The probability of an event happening is always between:** []
a) 0 and 10
b) -1 and 1
c) 0 and 1
d) None of the above


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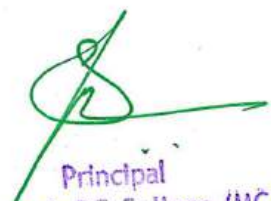
14. What is the probability of flipping a coin and getting heads or tails? []
a) 0.25
b) 0.5
c) 2.0
d) 1.0
15. Which rule applies to finding the probability of two independent events happening together? []
a) Addition rule
b) Complement rule
c) Multiplication rule
d) Bayes' theorem
16. Which of the following is a discrete probability distribution? []
a) Normal distribution
b) Binomial distribution
c) Exponential distribution
d) Chi-square distribution
17. A normal distribution is symmetric around its: []
a) Median
b) Mode
c) Mean
d) All of the above
18. The probability of success in a binomial distribution is denoted by: []
a) p
b) q
c) n
d) $1 - p$
19. What shape does the normal distribution curve have? []
a) Rectangular
b) Triangular
c) Skewed
d) Bell-shaped
20. Which property is true for a normal distribution? []
a) It is skewed right
b) The mean, median, and mode are equal
c) It is defined only for positive values
d) It has no variance
21. Which sampling method ensures every member of the population has an equal chance of being selected? []
a) Stratified sampling
b) Cluster sampling
c) Random sampling
d) Convenience sampling

22. **The Central Limit Theorem states that the sampling distribution of the sample mean:** []
- a) Is always uniform
 - b) Is normally distributed for a large sample size
 - c) Is skewed
 - d) Is binomial
23. **Which sampling method divides the population into groups and randomly selects entire groups?** []
- a) Random sampling
 - b) Stratified sampling
 - c) Cluster sampling
 - d) Systematic sampling
24. **A statistic calculated from a sample is called:** []
- a) Parameter
 - b) Estimator
 - c) Population metric
 - d) Confidence interval
25. **What is the purpose of sampling?** []
- a) To avoid data collection
 - b) To manipulate data
 - c) To reduce biases completely
 - d) To study a part to infer about the whole
26. **The null hypothesis (H_0) typically states:** []
- a) A significant relationship exists
 - b) There is no effect or difference
 - c) Data is skewed
 - d) Results are inconclusive
27. **A Type I error occurs when:** []
- a) The null hypothesis is true but rejected
 - b) The null hypothesis is false but accepted
 - c) The alternative hypothesis is rejected
 - d) The p-value is large
28. **What does ANOVA test for?** []
- a) Differences in proportions
 - b) Differences between multiple means
 - c) Relationships between variables
 - d) Equality of medians
29. **A chi-square test is used to analyze:** []
- a) Means of two groups
 - b) Variances
 - c) Continuous data
 - d) Categorical data

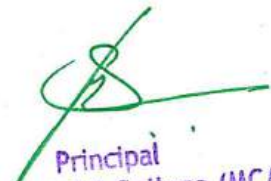
30. The significance level (alpha) is usually set at: []
a) 0.1
b) 0.05
c) 0.01
d) 1.0
31. A Pearson correlation coefficient of 0 indicates: []
a) Perfect positive correlation
b) Weak correlation
c) Perfect negative correlation
d) No correlation
32. The dependent variable in regression analysis is also called: []
a) Predictor variable
b) Outcome variable
c) Independent variable
d) Covariate
33. In multiple regression, the number of predictors is: []
a) One
b) Two
c) More than one
d) Any number
34. The slope in a simple linear regression represents: []
a) The y-intercept
b) Change in the dependent variable per unit change in the independent variable
c) The correlation coefficient
d) The standard error
35. The correlation coefficient ranges between: []
a) -2 to 2
b) 0 to 1
c) -1 to 1
d) -0.5 to 0.5
36. Which software is specifically designed for statistical analysis? []
a) Excel
b) PowerPoint
c) Photoshop
d) SPSS
37. What is the first step when working with data in software? []
a) Visualizing the data
b) Importing and cleaning the data
c) Performing hypothesis testing
d) Creating complex models


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38. Which software is open-source and widely used for statistical Programming? []
- a) R
 - b) SPSS
 - c) SAS
 - d) Minitab
39. In Excel, which function calculates the mean? []
- a) =MEAN()
 - b) =MEDIAN()
 - c) =MODE()
 - d) =AVERAGE()
40. Which plot is easily created in most statistical software? []
- a) Geographic maps
 - b) Box plot
 - c) 3D scatter plot
 - d) Flowchart
41. Case studies in statistics often involve: []
- a) Large theoretical data
 - b) Hypothetical scenarios
 - c) Real-world data analysis
 - d) Unrealistic assumptions
42. The first step in analyzing real-world data is: []
- a) Visualization
 - b) Cleaning and preparation
 - c) Hypothesis testing
 - d) Regression analysis
43. Statistical reports should always include: []
- a) Raw data only
 - b) Only graphs
 - c) Software commands
 - d) Interpretation of results
44. In a case study, hypothesis testing is used to: []
- a) Confirm or reject assumptions
 - b) Clean data
 - c) Perform advanced modeling
 - d) Find missing data
45. Statistical methods help in decision-making by: []
- a) Eliminating all risks
 - b) Providing evidence-based insights
 - c) Reducing computation time
 - d) Predicting with certainty


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46. **Advanced topics in statistics include:** []
- a) Bayesian analysis
 - b) Mean calculation
 - c) Bar chart creation
 - d) Sampling methods
47. **Reviewing key concepts ensures:** []
- a) Mastery of advanced topics
 - b) Better application of statistical methods
 - c) Avoiding software usage
 - d) Fewer errors in graphs
48. **Future directions in statistics often involve:** []
- a) Traditional methods only
 - b) Avoiding new technologies
 - c) Big data and machine learning
 - d) Focusing solely on descriptive statistics
49. **Recap sessions are useful for:** []
- a) Learning completely new material
 - b) Reinforcing previously learned concepts
 - c) Avoiding practical applications
 - d) Memorizing software commands
50. **Which is a key feature of modern statistical advancements?** []
- a) Decline in data importance
 - b) Reducing computational power
 - c) Focus only on theory
 - d) Integration with artificial intelligence



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1.2.1. Certificate/Value Added Courses

Question Paper

6. Certificate Program on DataScience and BigData Analytics

College code 1304	Aurora's PG College (MCA) Uppal, Hyderabad	
Course Code	Certificate Program on DataScience and BigData Analytics	Max Marks:50 Time: 1 Hr

Date :

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

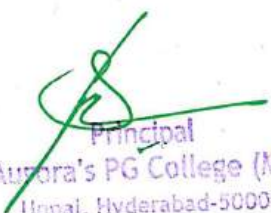
**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

1. **Which of the following best defines Data Science?** []
A. A field focused only on data visualization
B. The study of algorithms and machine learning exclusively
C. The interdisciplinary field that uses data to derive insights and make decisions
D. A subfield of software engineering
2. **What is the first step in the Data Science process?** []
A. Data Visualization
B. Data Collection
C. Model Building
D. Statistical Analysis
3. **Which term refers to the ability to understand and communicate the meaning of data?** []
A. Programming
B. Modeling
C. Data Literacy
D. Machine Learning
4. **Which of the following is an example of a data source?** []
A. APIs
B. Model Tuning
C. Decision Trees
D. PCA
5. **Which technique is used to handle missing data in a dataset?** []
A. Imputation
B. Data Aggregation
C. Outlier Detection
D. Clustering
6. **What is an outlier in a dataset?** []
A. A missing value
B. A data point significantly different from others
C. A transformed value
D. A central value

7. **What does EDA stand for?** []
A. Exploratory Data Alignment
B. Exploratory Data Analysis
C. Extended Data Aggregation
D. Evaluative Data Application
8. **Which of the following is a measure of central tendency?** []
A. Mean
B. Variance
C. Range
D. Skewness
9. **Which statistical test is used to determine if there is a significant difference between two groups?** []
A. PCA
B. T-Test
C. Regression
D. Clustering
10. **What does Hadoop primarily provide?** []
A. Machine Learning Libraries
B. Distributed Storage and Processing
C. Data Cleaning Tools
D. Visualization Dashboards
11. **Which of the following is a NoSQL database?** []
A. MySQL
B. MongoDB
C. PostgreSQL
D. Oracle
12. **Apache Spark is known for:** []
A. Creating Dashboards
B. Data Cleaning
C. Distributed Data Processing
D. Building APIs
13. **Which principle is crucial for effective data visualization?** []
A. Complex Design
B. Clarity and Simplicity
C. 3D Graphics Usage
D. Maximum Data Points
14. **Which library is widely used for creating plots in Python?** []
A. Spark
B. Matplotlib
C. MongoDB
D. Hadoop
15. **Tableau is best described as:** []
A. A machine learning framework
B. A statistical tool
C. A data visualization tool
D. A data storage system

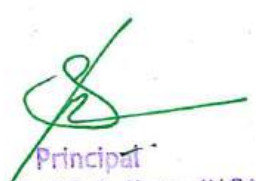
16. Which of the following is a supervised learning method? []
A. Linear Regression
B. K-Means Clustering
C. PCA
D. t-SNE
17. What does overfitting refer to in machine learning? []
A. A model performing well on training data but poorly on unseen data
B. A model performing poorly on all data
C. A model with no hyperparameters
D. A model with high accuracy on unseen data
18. Which metric is commonly used to evaluate classification models? []
A. Mean Squared Error
B. Accuracy
C. R-Squared
D. Silhouette Score
19. Logistic Regression is primarily used for: []
A. Clustering
B. Binary Classification
C. Regression Analysis
D. Dimensionality Reduction
20. Which algorithm uses a tree-like structure to make decisions? []
A. Decision Trees
B. Linear Regression
C. K-Means
D. PCA
21. What is the purpose of hyperparameter tuning? []
A. Cleaning data
B. Optimizing model performance
C. Generating new features
D. Reducing dimensionality
22. K-Means is a: []
A. Clustering Algorithm
B. Regression Algorithm
C. Classification Algorithm
D. Data Cleaning Technique
23. What does PCA stand for? []
A. Principal Component Accuracy
B. Principal Component Analysis
C. Proportional Component Algorithm
D. Predictive Cluster Analysis
24. Which of the following is used for anomaly detection? []
A. Logistic Regression
B. SVM
C. Decision Trees
D. Isolation Forest

25. Which programming language is primarily used with Apache Spark? []
A. JavaScript
B. PHP
C. Scala
D. MATLAB
26. What is Spark MLlib used for? []
A. Data Storage
B. Data Cleaning
C. Machine Learning
D. Visualization
27. Which of the following is a Spark data structure? []
A. DataFrame
B. RDD
C. API
D. Dashboard
28. What is the main goal of a capstone project in Data Science? []
A. Applying learned concepts to solve real-world problems
B. Memorizing statistical formulas
C. Writing extensive theoretical essays
D. Debugging software
29. A successful data science case study typically includes: []
A. Only visualizations
B. Only machine learning models
C. Clear problem definition, methodology, and insights
D. Data without analysis
30. Which of the following is important in presenting project findings? []
A. Extensive raw data
B. Minimal context
C. Clear and concise storytelling
D. Overly complex visualizations
31. Which of the following is NOT a key concept in Data Science? []
A. Data Collection
B. Hardware Configuration
C. Data Analysis
D. Insight Generation
32. What does "insight" in Data Science typically refer to? []
A. Raw data
B. Visualization
C. Valuable and actionable knowledge from data
D. Programming output
33. Data Science combines expertise from which of the following fields? []
A. Computer Science and Art
B. Biology and Mathematics
C. Computer Science, Statistics, and Domain Knowledge
D. Psychology and Engineering


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34. Which method can be used to detect outliers? []
A. T-Test
B. Box Plot
C. Linear Regression
D. Spark MLlib
35. Which transformation technique converts categorical variables into numerical values? []
A. Normalization
B. One-Hot Encoding
C. PCA
D. Data Aggregation
36. What does "data cleaning" involve? []
A. Visualizing the data
B. Removing errors and inconsistencies from data
C. Developing machine learning models
D. Running exploratory analysis
37. What does variance measure in a dataset? []
A. The average value
B. The spread of data around the mean
C. The sum of all data points
D. The difference between the highest and lowest values
38. What does a histogram display? []
A. Relationships between two variables
B. Data cleaning steps
C. Distribution of a single variable
D. Summary statistics
39. Which of these is NOT a component of Exploratory Data Analysis? []
A. Training machine learning models
B. Visualizing data distributions
C. Identifying patterns and trends
D. Checking for missing data
40. What is the primary purpose of NoSQL databases? []
A. Conducting statistical analysis
B. Storing structured data only
C. Handling unstructured or semi-structured data
D. Visualizing data
41. Hadoop's HDFS stands for: []
A. High-Density File System
B. Hierarchical Data Framework Storage
C. Hadoop Distributed File System
D. Hadoop Data Framework System
42. Which component of Spark handles in-memory data processing? []
A. Spark MLlib
B. Spark SQL
C. Spark Core
D. Spark Streaming

43. Which of the following is a Python library used for advanced data visualization? []
A. Pandas
B. Seaborn
C. NumPy
D. SQLite
44. Effective dashboards should: []
A. Present clear and actionable insights
B. Include as many data points as possible
C. Focus only on technical metrics
D. Avoid interactivity
45. What type of chart is best for showing proportions? []
A. Line Chart
B. Pie Chart
C. Scatter Plot
D. Box Plot
46. Which of the following is an unsupervised learning task? []
A. Clustering
B. Regression
C. Classification
D. Feature Scaling
47. A confusion matrix is used to evaluate: []
A. Classification models
B. Regression models
C. Clustering algorithms
D. Dimensionality reduction techniques
48. What is the purpose of a training dataset? []
A. Evaluating the final model
B. Training the model to learn patterns
C. Removing missing data
D. Visualizing the model
49. What type of problems does Linear Regression solve? []
A. Predicting continuous values
B. Predicting categorical values
C. Identifying clusters
D. Reducing dimensions
50. Which of these is NOT a classification algorithm? []
A. Decision Tree
B. Support Vector Machine
C. K-Nearest Neighbors
D. K-Means



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1.2.1. Certificate/Value Added Courses

Question Paper

7. Certificate Program on Start-Up Marketing


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB105	Certificate Program on Start-Up Marketing		Max Marks:50	Time: 1 Hr

Date : 31.01.2024

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

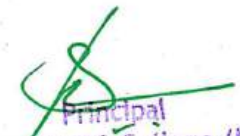
**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

1. **What is a key challenge for start-ups in marketing and sales?** []
A) Unlimited resources
B) Established brand presence
C) Limited budget and market recognition
D) High customer loyalty
2. **Which of the following is an opportunity for start-ups?** []
A) Larger competitors' market share
B) Flexibility and agility to adapt quickly
C) High marketing costs
D) Limited customer reach
3. **What is the role of marketing professionals in start-ups?** []
A) Building brand awareness and demand
B) Managing HR operations
C) Overseeing financial budgets
D) Writing sales contracts
4. **Why is the sales role critical in start-ups?** []
A) To focus on internal company growth
B) To drive revenue and secure early customers
C) To oversee product testing
D) To manage product manufacturing
5. **What fundamental concept must start-ups focus on?** []
A) Employee retention
B) Customer acquisition and retention
C) Asset management
D) Brand franchising
6. **What is the primary purpose of market research for start-ups?** []
A) Expanding internationally
B) Identifying target audiences and trends
C) Hiring marketing consultants
D) Creating financial forecasts



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7. **Which technique helps analyze market demand?** []
A) Internal staff reviews
B) Competitor budgeting
C) Customer surveys and focus groups
D) Office surveys
8. **What is a benefit of understanding customer needs?** []
A) Higher advertising costs
B) Better product-market fit
C) Limited customer engagement
D) Reduced market size
9. **Which is a key factor in market analysis?** []
A) HR trends
B) Competitor strategies and industry trends
C) Office location planning
D) Employee performance reviews
10. **How do start-ups use market research data?** []
A) To build office structures
B) To inform marketing and sales strategies
C) To hire employees
D) To expand into unrelated industries
11. **What is a core element of a marketing plan?** []
A) Goals, strategies, and tactics
B) Employee onboarding manuals
C) Legal policies
D) Office relocation plans
12. **Why is a value proposition important?** []
A) It highlights why customers should choose your product
B) It tracks team performance
C) It budgets product costs
D) It sets shipping fees
13. **What does a positioning strategy define?** []
A) How a product is perceived in the market
B) Employee responsibilities
C) Marketing team roles
D) Product testing timeline
14. **What is essential when allocating marketing budgets?** []
A) Ignoring performance results
B) Prioritizing high ROI activities
C) Avoiding financial planning
D) Increasing operational costs
15. **What should a marketing plan align with?** []
A) Business goals and customer needs
B) Competitor's HR policies
C) Staff bonus structures
D) Supply chain decisions

16. **What is consultative selling?** []
A) Forcing quick sales decisions
B) Focusing on customer needs and offering solutions
C) Selling low-quality products
D) Ignoring customer feedback
17. **What is the first step in a sales process?** []
A) Lead generation
B) Closing the deal
C) Collecting payments
D) Post-sale service
18. **What tool helps manage customer relationships?** []
A) Financial forecasting software
B) Employee management tools
C) CRM systems
D) Design software
19. **What does solution-based selling focus on?** []
A) Company growth only
B) Solving the customer's problems
C) Lowering product prices
D) Product testing results
20. **How can start-ups track sales performance?** []
A) Employee attendance
B) Sales metrics and analytics tools
C) Warehouse reports
D) Legal policies
21. **What is SEO?** []
A) Social Engagement Optimization
B) Search Engine Optimization
C) Sales Engagement Outreach
D) Staff Engagement Orientation
22. **What is a benefit of social media marketing?** []
A) Increased customer engagement
B) Reduced product quality
C) Increased HR spending
D) Limited online visibility
23. **Which metric measures online visibility?** []
A) Website traffic and impressions
B) Staff bonuses
C) Company expenses
D) Marketing team size
24. **Why is digital marketing cost-effective for start-ups?** []
A) It requires large budgets
B) It reaches a large audience at lower costs
C) It reduces team productivity
D) It limits product growth



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25. **What is content marketing used for?** []
A) Employee management
B) Attracting and retaining customers
C) Reducing digital channels
D) Expanding office size
26. **What is part of brand identity?** []
A) Logo, name, and messaging
B) Competitor goals
C) Supply chain systems
D) Employee salaries
27. **Why is brand positioning important?** []
A) To differentiate from competitors
B) To increase staff morale
C) To lower financial costs
D) To expand HR roles
28. **What maintains brand consistency?** []
A) Uniform messaging and visuals across channels
B) Random advertisements
C) Irregular marketing strategies
D) Non-branded content
29. **What makes content engaging?** []
A) Value, relevance, and clarity
B) Length and jargon
C) Complexity
D) Irrelevant topics
30. **Which platform is ideal for B2B marketing?** []
A) Instagram
B) LinkedIn
C) Pinterest
D) TikTok
31. **What is the core purpose of branding for start-ups?** []
A) To increase production times
B) To build recognition and trust with customers
C) To manage legal compliance
D) To hire employees
32. **Which of the following helps differentiate a start-up from competitors?** []
A) A clear value proposition and consistent brand messaging
B) Staff salary packages
C) Internal HR manuals
D) Irregular promotions
33. **What does brand consistency help achieve?** []
A) Decreased product sales
B) Limited market reach
C) Increased customer trust and loyalty
D) Reduced operational expenses


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34. **What role does positioning play in marketing?** []
A) Helps define the product's place in the market
B) Increases team meetings
C) Reduces production timelines
D) Limits advertising efforts
35. **Which element is NOT part of a start-up's branding?** []
A) Office layout
B) Logo design
C) Brand messaging
D) Brand values
36. **Why is content marketing essential for start-ups?** []
A) It builds credibility and attracts customers
B) It increases office expenses
C) It limits customer engagement
D) It focuses on internal staff growth
37. **What is the main benefit of using social media for marketing?** []
A) Enhanced brand visibility and customer engagement
B) Reduced online presence
C) Limited audience reach
D) High operational costs
38. **What metric is crucial for social media performance?** []
A) Employee bonuses
B) Engagement rate
C) Product testing reports
D) Supply chain logs
39. **What type of content typically performs best on social media?** []
A) Complex reports
B) Visual and interactive content
C) Internal HR manuals
D) Product safety reports
40. **How can start-ups optimize content marketing performance?** []
A) By analyzing metrics and adjusting strategies
B) By limiting promotions
C) By using outdated tools
D) By avoiding customer feedback
41. **What is the primary benefit of aligning sales and marketing?** []
A) Reducing employee morale
B) Creating a cohesive approach for customer acquisition
C) Ignoring customer data
D) Delaying product delivery
42. **What strategy ensures collaboration between sales and marketing teams?** []
A) Cross-departmental communication and shared goals
B) Independent workflows
C) Random project assignments
D) Isolated teams

43. **What can misalignment between sales and marketing lead to?** []
A) Improved teamwork
B) Lost leads and lower revenue
C) Higher customer satisfaction
D) Consistent messaging
44. **Which of the following helps measure integrated efforts?** []
A) Office attendance
B) Customer conversion rates
C) Warehouse data logs
D) Employee performance
45. **What supports an integrated marketing and sales campaign?** []
A) Clear strategies and shared KPIs
B) Separate project goals
C) Minimal team interaction
D) High operational expenses
46. **Why are KPIs important for marketing campaigns?** []
A) They increase company size
B) They measure performance and effectiveness
C) They limit product sales
D) They decrease resource allocation
47. **What is ROI in marketing?** []
A) Regular Office Integration
B) Return on Investment
C) Required Operational Impact
D) Reduced Organizational Incentives
48. **What should be done if a campaign performs poorly?** []
A) Analyze data and adjust strategies
B) Ignore the results
C) Increase campaign costs
D) Limit future campaigns
49. **Which metric determines campaign profitability?** []
A) Engagement rate
B) Return on Investment (ROI)
C) Product inventory
D) Office budgets
50. **What step comes after analyzing campaign performance?** []
A) Employee training
B) Strategy adjustment and improvement
C) Team reorganization
D) Financial audits



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1.2.1. Certificate/Value Added Courses

Question Paper

8. Certificate Program on AI and ML in Business


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad		
Course Code	CMC209	Certificate Program on AI and Machine Learning-in Business	Max Marks:50	Time: 1 Hr

Date :17.02.2024

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:


1. **What does AI stand for?** []
 - a) Artificial Insight
 - b) Automated Intelligence
 - c) Artificial Intelligence
 - d) Advanced Information
2. **Machine Learning is a subset of:** []
 - a) Data Analysis
 - b) Big Data
 - c) Data Mining
 - d) Artificial Intelligence
3. **Who is considered the "father" of AI?** []
 - a) Alan Turing
 - b) John McCarthy
 - c) Both a and b
 - d) None of the above
4. **Which of the following represents a future trend in AI?** []
 - a) General AI development
 - b) Decline in AI usage
 - c) Transition away from data-driven models
 - d) None of the above
5. **What does "ML" stand for in the context of AI?** []
 - a) Machine Level
 - b) Model Learning
 - c) Machine Learning
 - d) Multi-Layer


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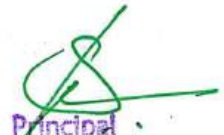
6. **Why is data preprocessing important?** []
a) It ensures the quality of data used for modelling
b) It adds noise to data
c) It makes data harder to interpret
d) It reduces computation time unnecessarily
7. **Which of the following is a data-cleaning technique?** []
a) Removing missing values
b) Encoding categorical data
c) Normalization
d) All of the above
8. **Feature engineering involves:** []
a) Creating new features
b) Transforming raw data
c) Improving model accuracy
d) All of the above
9. **Data used in AI must be:** []
a) Relevant and high-quality
b) Limited and unstructured
c) Noise-free only
d) Free from any processing
10. **An imbalanced dataset can lead to:** []
a) Higher accuracy
b) Better predictions
c) Biased models
d) None of the above
11. **Which of these is an example of supervised learning?** []
a) Classification
b) Clustering
c) Dimensionality reduction
d) Reinforcement learning
12. **Unsupervised learning algorithms work without:** []
a) Data
b) Labels
c) Features
d) Predictions
13. **Reinforcement learning focuses on:** []
a) Predefined datasets
b) Outlier detection
c) Label matching
d) Reward-based decision-making

14. **A regression model predicts:** []
a) Categories
b) Continuous values
c) Classes
d) Clusters
15. **K-Means clustering is an example of:** []
a) Unsupervised learning
b) Supervised learning
c) Reinforcement learning
d) None of the above
16. **Which is a popular ML framework?** []
a) TensorFlow
b) SQL
c) Hadoop
d) Docker
17. **PyTorch is mainly used for:** []
a) Data storage
b) Statistical analysis
c) Deep learning
d) None of the above
18. **What does model evaluation measure?** []
a) Model structure
b) Model performance
c) Dataset consistency
d) Dataset size
19. **Which framework is known for flexibility in ML?** []
a) PyTorch
b) Excel
c) SQL Server
d) Tableau
20. **Hands-on practice with frameworks helps in:** []
a) Model deployment
b) Model testing
c) Both a and b
d) Neither
21. **AI helps marketing teams through:** []
a) Customer segmentation
b) Supply chain analysis
c) Fraud detection
d) Predictive maintenance

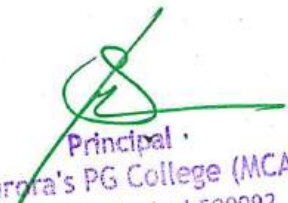
22. **Predictive analytics in finance is used for:** []
a) Supply chain optimization
b) Fraud detection
c) Market segmentation
d) None of the above
23. **Which is a key AI application in operations?** []
a) Predictive analytics
b) Fraud detection
c) Predictive maintenance
d) Customer segmentation
24. **Algorithmic trading is commonly associated with:** []
a) Finance
b) Marketing
c) Operations
d) Legal
25. **Supply chain optimization benefits from AI through:** []
a) Improved customer segmentation
b) Demand forecasting
c) Detecting fraud
d) None of the above
26. **What is the first step in implementing AI solutions?** []
a) Data collection
b) Model deployment
c) Evaluation metrics
d) None of the above
27. **Model training requires:** []
a) Deployment infrastructure
b) Quality datasets
c) Business compliance
d) None of the above
28. **Deployment refers to:** []
a) Integrating a trained model into a business system
b) Collecting raw data
c) Developing features
d) Pre-processing
29. **Building an AI model involves:** []
a) Creating structured data
b) Designing algorithms
c) Avoiding data pre-processing
d) None of the above


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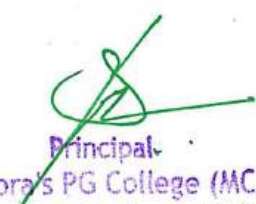
30. **Which phase is critical for business alignment?** []
- a) Deployment
 - b) Data pre-processing
 - c) Model evaluation
 - d) None
31. **ROI stands for:** []
- a) Risk of Investment
 - b) Rate of Intelligence
 - c) Return on Investment
 - d) Real Optimization Index
32. **Case studies help in:** []
- a) Understanding AI benefits in real-world contexts
 - b) Avoiding strategy planning
 - c) Generalizing models
 - d) None of the above
33. **Strategic implications of AI include:** []
- a) Data normalization
 - b) Model deployment
 - c) Business competitiveness
 - d) Dataset labeling
34. **AI investments are measured through:** []
- a) Training time
 - b) Cost savings and revenue generation
 - c) Feature creation
 - d) Data collection
35. **Successful implementations rely on:** []
- a) Random experimentation
 - b) Clear objectives and quality data
 - c) Overfitting
 - d) None of the above
36. **Data privacy is essential for:** []
- a) Faster models
 - b) Regulatory compliance
 - c) Improving model accuracy
 - d) None of the above
37. **Bias in AI models can lead to:** []
- a) Discrimination
 - b) Improved accuracy
 - c) Better generalization
 - d) None of the above


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38. **Explain ability of AI models helps in:** []
a) Simplifying data collection
b) Reducing deployment time
c) Gaining user trust
d) None of the above
39. **What is a challenge in maintaining fairness in AI?** []
a) Large datasets
b) Feature engineering
c) Bias in training data
d) Model selection
40. **Security in AI primarily focuses on:** []
a) Algorithm speed
b) Protecting sensitive data
c) Model complexity
d) Dataset size
41. **AI strategy development involves:** []
a) Building algorithms
b) Aligning AI with business goals
c) Improving model accuracy
d) Data collection
42. **Governance ensures:** []
a) Proper management of AI projects
b) Faster model training
c) Reduced feature selection
d) Simplified preprocessing
43. **Compliance in AI refers to:** []
a) Improving performance
b) Adhering to regulations and standards
c) Model deployment
d) Data normalization
44. **Managing AI projects requires:** []
a) Limited resources
b) Clear planning and execution
c) Complex datasets
d) None of the above
45. **AI strategy benefits businesses by:** []
a) Creating isolated models
b) Reducing competitiveness
c) Improving operational efficiency
d) None of the above


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46. **Real-world AI applications demonstrate:** []
- a) Conceptual advantages only
 - b) Theoretical constraints
 - c) Practical benefits of AI
 - d) None of the above
47. **Group projects enhance:** []
- a) Theoretical understanding
 - b) Data pre-processing speed
 - c) Collaborative problem-solving skills
 - d) None
48. **Project presentations allow:** []
- a) Avoiding evaluation
 - b) Sharing insights and receiving feedback
 - c) Ignoring real-world use cases
 - d) None of the above
49. **AI is implemented in business for:** []
- a) Collecting raw data
 - b) Testing models
 - c) Solving specific problems
 - d) Data labelling
50. **A well-designed AI project includes:** []
- a) Ambiguous goals
 - b) Limited data sources
 - c) Clear objectives and measurable outcomes
 - d) Randomly chosen methods



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1.2.1. Certificate/Value Added Courses

Question Paper

9. Training Program on IT Fundamentals

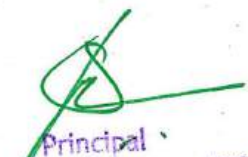
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	TMB203	Training Program on IT Fundamentals		Max Marks:50	Time: 1 Hr

Date : 17.02.2024


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:


1. **What does IT stand for?** []
a) Internet Technology
b) Information Technology
c) Intelligent Technology
d) Interactive Technology
2. **Which of the following is NOT a key concept in IT?** []
a) Data Storage
b) Data Transmission
c) Rocket Propulsion
d) Data Security
3. **What is the primary role of IT in modern organizations?** []
a) Creating physical products
b) Supporting business processes through technology
c) Manufacturing hardware
d) Replacing employees with machines
4. **Which component is known as the "brain" of the computer?** []
a) RAM
b) CPU
c) Hard Drive
d) Motherboard
5. **What does RAM stand for?** []
a) Read-Only Memory
b) Random Access Memory
c) Rapid Application Module
d) Random Allocation Mechanism
6. **Which type of storage is non-volatile?** []
a) RAM
b) SSD
c) Cache Memory
d) Registers


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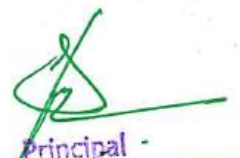
7. **What is the primary function of peripherals?** []
a) To connect devices to the internet
b) To store data permanently
c) To expand the functionality of a computer
d) To cool the CPU
8. **Which of these is NOT an operating system?** []
a) Windows
b) Linux
c) macOS
d) Google Chrome
9. **What is the primary role of an operating system?** []
a) Manage hardware and software resources
b) Provide antivirus protection
c) Develop applications
d) Maintain internet connectivity
10. **Which file system is commonly used by Windows operating systems?** []
a) NTFS
b) EXT4
c) APFS
d) FAT32
11. **Which of these is considered a productivity tool?** []
a) Microsoft Word
b) Adobe Photoshop
c) Mozilla Firefox
d) Steam
12. **What is the purpose of software updates?** []
a) To uninstall unused applications
b) To fix bugs and improve functionality
c) To increase hardware speed
d) To reset the operating system
13. **Which of these is an example of open-source software?** []
a) Microsoft Office
b) Google Chrome
c) LibreOffice
d) Adobe Acrobat
14. **What does LAN stand for?** []
a) Large Area Network
b) Local Area Network
c) Linked Access Network
d) Logical Area Network
15. **Which device is used to connect multiple devices on the same network?** []
a) Router
b) Switch
c) Modem
d) Firewall


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16. Which protocol is primarily used for web browsing? []
a) FTP
b) TCP
c) HTTP
d) SMTP
17. Which of the following is an example of a cybersecurity threat? []
a) Phishing
b) VPN
c) Cloud Computing
d) LAN
18. What does a firewall do? []
a) Protects against overheating
b) Filters incoming and outgoing network traffic
c) Prevents hardware failures
d) Encrypts user data
19. Which is the best practice for password management? []
a) Using the same password for all accounts
b) Sharing passwords with colleagues
c) Using a password manager
d) Avoiding passwords longer than six characters
20. What is the first step in systematic troubleshooting? []
a) Implementing a solution
b) Identifying the problem
c) Replacing hardware
d) Restarting the system
21. Which tool can help diagnose network issues? []
a) Disk Cleanup
b) Task Manager
c) Ping Command
d) System Restore
22. What does "blue screen of death" indicate? []
a) A hardware upgrade
b) A critical system error
c) A virus infection
d) A power failure
23. What is a key responsibility of IT support? []
a) Designing hardware
b) Resolving technical issues
c) Marketing new products
d) Writing user manuals
24. Which is an example of a service desk best practice? []
a) Ignoring unresolved issues
b) Documenting all interactions
c) Prioritizing new customers over existing ones
d) Limiting communication channels


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25. **What is a common IT support scenario?** []
a) Software installation requests
b) Hardware manufacturing
c) Creating financial reports
d) Marketing campaigns
26. **What does IoT stand for?** []
a) Internet of Tools
b) Internet of Things
c) Integration of Technology
d) Intelligent Operations Terminal
27. **Which technology allows storing and accessing data over the internet?** []
a) Cloud Computing
b) Blockchain
c) Artificial Intelligence
d) Virtual Reality
28. **What is a key benefit of emerging technologies in IT?** []
a) Increased hardware costs
b) Enhanced efficiency and innovation
c) Reduced system compatibility
d) Limited user accessibility
29. **What is the purpose of practical exercises in IT training?** []
a) To memorize concepts
b) To apply theoretical knowledge
c) To skip assessments
d) To avoid hands-on experience
30. **Which certification is commonly pursued by IT beginners?** []
a) AWS Certified Solutions Architect
b) CompTIA A+
c) CCIE
d) PMP
31. **Which of the following is an example of IT enabling business growth?** []
a) Implementing automated customer service
b) Reducing staff numbers
c) Increasing manual paperwork
d) Avoiding technology upgrades
32. **What is the primary goal of IT governance in an organization?** []
a) Reducing operational costs
b) Aligning IT strategy with business goals
c) Increasing data redundancy
d) Limiting employee access to systems
33. **Which device converts digital signals to analog signals for internet Connectivity?** []
a) Router
b) Modem
c) Switch
d) NIC


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34. **What is the purpose of a power supply unit (PSU) in a computer?** []
a) Store data
b) Provide electrical power to components
c) Process calculations
d) Connect peripherals
35. **Which of the following is an example of input hardware?** []
a) Monitor
b) Printer
c) Keyboard
d) Speakers
36. **What is the default file manager for macOS?** []
a) Finder
b) File Explorer
c) Nautilus
d) Thunar
37. **What feature of an operating system allows multiple applications to run simultaneously?** []
a) Multithreading
b) Multitasking
c) Virtualization
d) Caching
38. **What does the Linux command "ls" do?** []
a) Displays the contents of a file
b) Lists files and directories
c) Deletes a file
d) Copies a file
39. **Which software application is used primarily for spreadsheets?** []
a) Adobe Acrobat
b) Microsoft Excel
c) Google Chrome
d) VLC Media Player
40. **What is the main purpose of antivirus software?** []
a) Optimize system performance
b) Protect against malware
c) Manage user accounts
d) Enhance graphic quality
41. **What is the primary purpose of a DNS (Domain Name System)?** []
a) To manage file permissions
b) To translate domain names into IP addresses
c) To monitor network speed
d) To secure network traffic
42. **What does TCP in TCP/IP stand for?** []
a) Transfer Control Protocol
b) Transmission Control Protocol
c) Telecommunication Protocol
d) Temporary Connection Protocol


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43. Which network topology connects all devices in a closed loop? []
a) Star
b) Mesh
c) Ring
d) Bus
44. What is a common method used in phishing attacks? []
a) Sending fraudulent emails to trick users into revealing personal information
b) Encrypting files for data protection
c) Installing firewalls
d) Blocking access to websites
45. Which of the following is a strong password example? []
a) password123
b) 123456789
c) P@ssw0rd!2024
d) qwerty
46. Which tool is commonly used to check hard drive health? []
a) Disk Management
b) Task Manager
c) CHKDSK
d) Notepad
47. If a computer won't boot, what should you check first? []
a) Network connectivity
b) Power supply
c) Installed applications
d) Antivirus software
48. Which IT support role focuses on addressing customer-reported technical issues? []
a) Network Engineer
b) Service Desk Analyst
c) Systems Administrator
d) Database Manager
49. What is a Service Level Agreement (SLA)? []
a) A hardware installation manual
b) A contract outlining expected IT support levels
c) A software update process
d) A troubleshooting guide
50. Which technology uses distributed ledgers for secure transactions? []
a) Artificial Intelligence
b) Blockchain
c) IoT
d) Cloud Computing



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1.2.1. Certificate/Value Added Courses

Question Paper

10. Training Program on Django

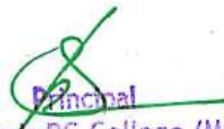
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad		
Course Code	TMC204	Training Program on Django	Max Marks:50	Time: 1 Hr

Date :26.04.2024


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What is Django primarily used for?** []
A) Desktop applications
B) Web development
C) Mobile applications
D) Game development
2. **Which of the following is NOT a key feature of Django?** []
A) MVC architecture
B) Built-in ORM
C) Client-side scripting
D) Scalability
3. **What command is used to install Django using pip?** []
A) pip install django-framework
B) pip install django
C) pip download django
D) pip install web-django
4. **Which file is required to start a Django project?** []
A) manage.py
B) settings.py
C) init.py
D) urls.py
5. **A Django project typically contains multiple:** []
A) Functions
B) Apps
C) Scripts
D) Databases

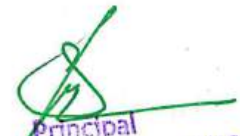

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6. **The main purpose of settings.py is to:** []
A) Configure database models
B) Define URL patterns
C) Store project-wide settings
D) Serve static files
7. **What command is used to create a new Django project?** []
A) django-admin newproject
B) django-admin startproject
C) django-admin createproject
D) django-admin initproject
8. **Which folder is responsible for storing templates in a Django project?** []
A) static
B) templates
C) views
D) migrations
9. **What does ORM stand for in Django?** []
A) Object Relation Mapping
B) Object Relational Management
C) Object-Relational Mapping
D) Object Relational Model
10. **How do you define a model in Django?** []
A) By creating a class in the views.py file
B) By creating a class in the models.py file
C) By writing SQL commands
D) By using the admin.py file
11. **What command is used to apply model changes to the database?** []
A) python manage.py makemodels
B) python manage.py makemigrations
C) python manage.py syncdb
D) python manage.py migrateall
B) python manage.py makemigrations
12. **Which field type is used for storing textual data in Django?** []
A) CharField
B) TextField
C) StringField
D) FileField
13. **Django views are responsible for:** []
A) Handling database operations
B) Mapping URLs to HTML files
C) Handling HTTP requests and responses
D) Managing user sessions



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14. How do you define a URL pattern in Django? []
- A) By using the URL patterns list in urls.py
 - B) By writing it in the settings.py file
 - C) By creating a new function in views.py
 - D) By modifying the models.py file
15. What is the primary difference between function-based views (FBVs) and class-based views (CBVs)? []
- A) CBVs support user authentication by default
 - B) FBVs are written as Python classes
 - C) CBVs provide reusable methods for common tasks
 - D) FBVs are required for managing forms
 - C) CBVs provide reusable methods for common tasks
16. What is the HTTP response returned by HTTP Response() in Django? []
- A) JSON
 - B) HTML
 - C) Plain text
 - D) Depends on the content type
17. Django templates use which syntax for placeholders? []
- A) {{ variable }}
 - B) [variable]
 - C) (variable)
 - D) < variable >
18. Template inheritance in Django is achieved using: []
- A) {% extends %}
 - B) {% block %}
 - C) {% include %}
 - D) {% for %}
19. Which folder is used for storing static files in Django? []
- A) assets
 - B) public
 - C) static
 - D) templates
20. Static files can include: []
- A) HTML files
 - B) Python scripts
 - C) CSS and JavaScript files
 - D) Database models
21. What is the primary purpose of Django forms? []
- A) Styling HTML pages
 - B) Managing URL patterns
 - C) Handling and validating user input
 - D) Storing data in models

22. What class is used to create a form based on a model? []
A) ModelForms
B) FormModel
C) DjangoForm
D) ModelForm
23. Which method validates form data in Django? []
A) clean()
B) validate()
C) form_validate()
D) process()
24. When a form is invalid, the form object contains: []
A) No data
B) Error messages in form.errors
C) The original input data in form.data
D) Error messages in form.messages
25. Which method is used to check if a user is authenticated? []
A) user.is_active
B) user.is_authenticated
C) user.is_valid
D) user.is_logged_in
26. What is the default model for user authentication in Django? []
A) UserAccount
B) AuthModel
C) User
D) UserProfile
27. How do you restrict access to a view to logged-in users only? []
A) Use the @login_required decorator
B) Set login_required=True in settings.py
C) Use the is_authenticated() method
D) Check user authentication manually
28. What is the purpose of permissions in Django? []
A) To store user credentials
B) To manage access control for users and groups
C) To handle user sessions
D) To restrict database access
29. What is the command to create a superuser for the Django admin interface? []
A) python manage.py superuser
B) python manage.py createsuperuser
C) python manage.py adminuser
D) python manage.py initadmin

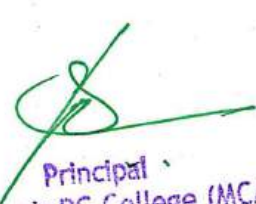

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30. Which file is used to customize the Django admin interface? []
- A) settings.py
 - B) admin.py
 - C) views.py
 - D) models.py
31. How do you register a model in the Django admin interface? []
- A) Using models.register()
 - B) Using admin.site.register()
 - C) Using admin.add_model()
 - D) Using admin.include_model()
32. What is the purpose of customizing the admin dashboard in Django? []
- A) To modify database structure
 - B) To improve usability for managing data
 - C) To handle user authentication
 - D) To restrict access to certain URLs
33. Which framework is used for writing tests in Django? []
- A) unittest
 - B) pytest
 - C) testdjango
 - D) djtest
34. How do you run tests in a Django project? []
- A) python manage.py run_tests
 - B) python manage.py test
 - C) python manage.py unittest
 - D) python manage.py runtestcases
35. The Django Debug Toolbar is primarily used for: []
- A) Debugging JavaScript code
 - B) Identifying SQL queries and performance issues
 - C) Managing user sessions
 - D) Debugging HTML templates
36. What does the assertEquals() method do in a Django test case? []
- A) Compares two strings
 - B) Compares two objects for equality
 - C) Compares two database queries
 - D) Compares form inputs
37. Which command collects all static files for deployment? []
- A) python manage.py gatherstatic
 - B) python manage.py collectstatic
 - C) python manage.py deploy static
 - D) python manage.py static deploy


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- 38. Which of the following is a popular platform for deploying Django applications?** []
- A) Heroku
 - B) Firebase
 - C) WordPress
 - D) Wix
- 39. What is the primary purpose of using Gunicorn or uWSGI with Django?** []
- A) To manage database connections
 - B) To serve Django applications in production
 - C) To handle user authentication
 - D) To optimize template rendering
- 40. What is the purpose of environment variables in a production Django application?** []
- A) To store sensitive configuration data securely
 - B) To manage database schema
 - C) To improve debugging capabilities
 - D) To restrict user access
- 41. What is the default database engine used by Django?** []
- A) MySQL
 - B) PostgreSQL
 - C) SQLite
 - D) MongoDB
- 42. How do you include an app in a Django project?** []
- A) Add the app name to the INSTALLED_APPS list in settings.py
 - B) Use django-admin includeapp command
 - C) Write the app name in urls.py
 - D) Import the app in views.py
- 43. What does the {% csrf_token %} tag do in Django forms?** []
- A) Adds user authentication to the form
 - B) Protects against Cross-Site Request Forgery attacks
 - C) Validates form fields automatically
 - D) Enables AJAX functionality in forms
- 44. What is the default port for running the Django development server?** []
- A) 8080
 - B) 3000
 - C) 8000
 - D) 5000
- 45. Which middleware is required for enabling sessions in Django?** []
- A) Session Middleware
 - B) Authentication Middleware
 - C) CSRF Middleware
 - D) Security Middleware

46. What does the `make migrations` command do? []
- A) Applies changes to the database
 - B) Creates migration files for model changes
 - C) Deletes unused models
 - D) Syncs the database with the app
47. Which of these is NOT a Django template tag? []
- A) `{% for %}`
 - B) `{% if %}`
 - C) `{% def %}`
 - D) `{% include %}`
48. How do you pass data from a view to a template? []
- A) By modifying the `settings.py` file
 - B) By using the context dictionary
 - C) By calling the `render template()` function
 - D) By creating a middleware
49. Which HTTP method is used for submitting form data? []
- A) GET
 - B) POST
 - C) PUT
 - D) DELETE
50. How do you define a model-to-model relationship in Django? []
- A) Using Foreign Key, Many To Many Field, or One To One Field
 - B) By writing SQL queries in the `models.py` file
 - C) By creating a relationship in the `views.py` file
 - D) By using the `relationships.py` file



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1.2.1. Certificate/Value Added Courses

Question Paper

11. Certificate Program on Leadership Development

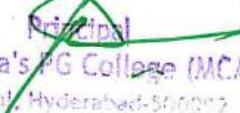
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB104	Certificate Program on Leadership Development		Max Marks:50	Time: 1 Hr

Date : 26.04.2024

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	


Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What is leadership primarily focused on?** []
a) Controlling people
b) Influencing and guiding individuals or groups
c) Managing budgets
d) Following orders
2. **Which theory of leadership focuses on specific innate qualities of leaders?** []
a) Transformational theory
b) Behavioral theory
c) Trait theory
d) Situational theory
3. **Which leadership style involves exchanging rewards for performance?** []
a) Autocratic
b) Transformational
c) Transactional
d) Laissez-Faire
4. **Who is considered a transformational leader?** []
a) Someone who rewards employees regularly
b) Someone who micromanages
c) Someone who inspires and motivates change
d) Someone who avoids conflict
5. **What is the role of a leader in modern organizations?** []
a) Enforce strict compliance
b) Provide direction, vision, and motivation
c) Focus solely on individual performance
d) Maintain existing processes
6. **What is a key component of Emotional Intelligence (EI)?** []
a) IQ measurement
b) Self-awareness
c) Organizational skills
d) Charisma


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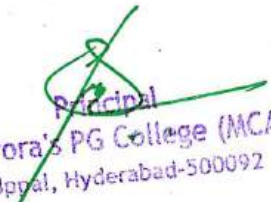
7. **Which self-assessment tool categorizes personality into types like ENTJ or INFP?** []
a) 360-Degree Feedback
b) MBTI (Myers-Briggs Type Indicator)
c) SWOT Analysis
d) Johari Window
8. **What does 360-Degree Feedback involve?** []
a) Feedback from peers, subordinates, and supervisors
b) One-on-one evaluations
c) Assessing leadership styles only
d) Self-reflection without feedback
9. **Which of these is a key first step in developing a leadership development plan?** []
a) Ignoring weaknesses
b) Self-assessment and reflection
c) Setting unrealistic goals
d) Delegating responsibility
10. **Why is emotional intelligence important for leadership?** []
a) To manage budgets effectively
b) To reduce accountability
c) To understand and manage emotions in oneself and others
d) To measure intelligence quotient (IQ)
11. **What does strategic thinking emphasize?** []
a) Short-term achievements
b) Long-term planning and vision
c) Avoiding risks
d) Quick decisions
12. **The SWOT analysis tool is used to analyze:** []
a) Human resources
b) Financial statements
c) Strengths, Weaknesses, Opportunities, and Threats
d) Organizational policies
13. **Which model supports decision-making in uncertain environments?** []
a) Vroom-Yetton Decision Model
b) Hierarchical Model
c) Visionary Model
d) Feedback Loop
14. **What is a key characteristic of strategic leaders?** []
a) Impulsive decision-making
b) Focusing only on operations
c) Aligning vision with action
d) Avoiding collaboration
15. **What role do case studies play in strategic leadership learning?** []
a) To focus on irrelevant details
b) To provide real-world examples of decision-making
c) To emphasize individual goals
d) To delay learning

16. Which leadership style promotes full team participation? []
a) Autocratic
b) Democratic
c) Transformational
d) Laissez-Faire
17. Adaptive leadership requires: []
a) Following a single style in all situations
b) Avoiding risks
c) Adjusting leadership approaches to challenges
d) Delegating all responsibility
18. When is the autocratic leadership style effective? []
a) In creative brainstorming sessions
b) During emergencies or crises
c) When encouraging innovation
d) In diverse cultural settings
19. What is the focus of situational leadership? []
a) Consistency in style
b) Adapting leadership style based on team needs
c) Avoiding delegation
d) Following strict rules
20. What does laissez-faire leadership encourage? []
a) Micromanagement
b) Autonomy and independence
c) Close supervision
d) Strict discipline
21. What is a key technique for effective communication? []
a) Interrupting frequently
b) Active listening
c) Using jargon excessively
d) Ignoring feedback
22. What builds trust and credibility as a leader? []
a) Avoiding conflict
b) Consistency and integrity
c) Delegating without guidance
d) Micromanaging
23. Persuasion relies heavily on: []
a) Coercion
b) Logical arguments and emotional appeal
c) Following strict orders
d) Avoiding communication
24. Non-verbal communication includes: []
a) Written emails
b) Body language and facial expressions
c) Verbal speeches
d) Phone calls

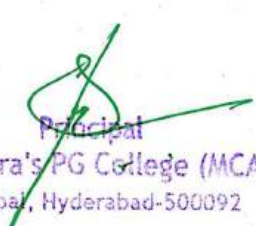

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25. **Which of the following is critical for influencing teams?** []
a) Ignoring opinions
b) One-way communication
c) Building relationships and trust
d) Avoiding transparency
26. **What drives successful team building?** []
a) Isolated work
b) Strict rules
c) Clear goals and trust
d) Assigning blame
27. **Motivating teams requires:** []
a) Ignoring achievements
b) Solely financial rewards
c) Understanding individual and group needs
d) Micromanaging tasks
28. **Which technique resolves conflicts effectively?** []
a) Avoidance
b) Collaboration and communication
c) Blame assignment
d) Ignoring the issue
29. **What is a characteristic of high-performing teams?** []
a) Lack of communication
b) Strong collaboration and accountability
c) Individual work focus
d) Hierarchical control
30. **The main principle of team dynamics is:** []
a) Competition over cooperation
b) Interdependence and role clarity
c) Lack of structure
d) Avoiding communication
31. **What is a leader's primary role in change management?** []
a) Enforcing compliance only
b) Guiding teams through the change process
c) Avoiding risks
d) Encouraging resistance
32. **Resistance to change can be managed by:** []
a) Ignoring concerns
b) Forcing compliance
c) Clear communication and involvement
d) Delaying implementation
33. **What fosters a culture of innovation?** []
a) Avoiding risks
b) Strict supervision
c) Encouraging creativity and new ideas
d) Sticking to routines

34. **Who introduced the 8-Step Change Model?** []
a) Peter Drucker
b) John Kotter
c) Henry Mintzberg
d) Daniel Goleman
35. **Innovation thrives in organizations where:** []
a) Change is resisted
b) Leadership suppresses ideas
c) Failure is treated as a learning opportunity
d) Hierarchies dominate
36. **What is a key consideration when leading cross-cultural teams?** []
a) Strictly enforcing one culture's norms
b) Respecting and understanding cultural differences
c) Ignoring cultural differences
d) Promoting a singular leadership style
37. **Which of the following best describes global leadership?** []
a) Focusing on local issues only
b) Managing teams across various countries and cultures
c) Ignoring cultural diversity
d) Centralizing all decision-making
38. **How can leaders promote diversity and inclusion?** []
a) Avoid addressing differences
b) Create an environment where all voices are heard
c) Only focus on gender diversity
d) Discourage diverse perspectives
39. **Which strategy is essential for leading in a global environment?** []
a) Centralizing decisions in the home country
b) Understanding and adapting to local customs
c) Ignoring local market needs
d) Maintaining a rigid approach across all regions
40. **What is the major challenge of leading a global team?** []
a) Ensuring complete agreement at all times
b) Overcoming cultural misunderstandings
c) Managing local offices independently
d) Avoiding digital communication
41. **What is ethical leadership focused on?** []
a) Maximizing profits regardless of means
b) Acting with integrity and fairness
c) Ignoring legal considerations
d) Promoting individual achievement over team goals
42. **What does Corporate Social Responsibility (CSR) involve?** []
a) Maximizing shareholder returns
b) Contributing positively to society and the environment
c) Reducing operational costs
d) Minimizing legal compliance


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43. **What is a common ethical dilemma faced by leaders?** []
a) Ignoring employee feedback
b) Balancing profitability with ethical standards
c) Avoiding difficult decisions
d) Ensuring maximum control over all decisions
44. **Which of these is a principle of ethical leadership?** []
a) Transparency and accountability
b) Focusing on personal gain
c) Ignoring conflicts of interest
d) Avoiding responsibility
45. **What is the role of ethical leadership in organizational culture?** []
a) To prioritize profits over all else
b) To establish and reinforce ethical practices across the organization
c) To centralize all decision-making
d) To reduce employee autonomy
46. **What is a key emerging trend in leadership?** []
a) Ignoring technology
b) Digital leadership
c) Focusing on traditional management methods
d) Avoiding remote work
47. **Why is developing long-term leadership skills important?** []
a) To focus only on short-term goals
b) To ensure sustainable success and adaptability
c) To avoid responsibility
d) To manage teams more efficiently
48. **What does digital leadership require?** []
a) Focusing only on in-person meetings
b) Embracing technology and virtual communication tools
c) Relying solely on traditional methods
d) Ignoring digital transformation
49. **What is a primary challenge for future leaders?** []
a) Managing only local teams
b) Adapting to fast-paced technological and societal changes
c) Delegating all tasks
d) Avoiding risks
50. **Which of these is an essential skill for future leaders?** []
a) Focusing solely on technical expertise
b) Flexibility and adaptability
c) Ignoring emotional intelligence
d) Rigidly following established practices



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1.2.1. Certificate/Value Added Courses

Question Paper

12. Certificate Program on Entrepreneurial Strategic Management

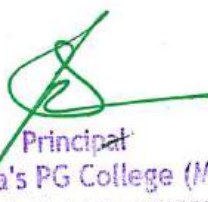
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad		
Course Code	CMB207	Certificate Program on Entrepreneurial Strategic Management	Max Marks:50	Time: 1 Hr

Date :17.05.2024


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**


1. **What is the primary goal of strategic management?** []
 - a. Maximizing short-term profits
 - b. Aligning organizational activities with long-term objectives
 - c. Achieving and maintaining a competitive advantage
 - d. Reducing employee turnover
2. **Which of the following best describes the entrepreneurial context of strategic management?** []
 - a. Applying traditional strategies without adaptation
 - b. Relying solely on historical data
 - c. Adapting strategies to the dynamic and uncertain nature of startups
 - d. Focusing only on cost reduction
3. **What is the first step in the strategic management process?** []
 - a. Strategy formulation
 - b. Strategy implementation
 - c. Performance evaluation
 - d. Market analysis
4. **A vision statement should primarily:** []
 - a. Focus on current operations
 - b. Inspire and guide the future direction of the organization
 - c. Define specific annual goals
 - d. Highlight financial achievements
5. **SMART objectives must be all of the following EXCEPT:** []
 - a. Measurable
 - b. Relevant
 - c. Time-bound
 - d. Expensive


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6. **A mission statement typically:** []
- a. Describes the company's long-term aspirations
 - b. Defines the organization's purpose and values
 - c. Lists operational details
 - d. Outlines financial strategies
7. **A key benefit of SWOT analysis is:** []
- a. Predicting exact market trends
 - b. Eliminating competition
 - c. Identifying internal and external factors impacting the business
 - d. Ensuring immediate profitability
8. **The PESTEL framework analyzes all of the following EXCEPT:** []
- a. Organizational culture
 - b. Technological advancements
 - c. Legal regulations
 - d. Environmental factors
9. **Which tool is primarily used to assess industry competition?** []
- a. SWOT analysis
 - b. Ansoff Matrix
 - c. Porter's Five Forces
 - d. Business Model Canvas
10. **Which is NOT a component of the Business Model Canvas?** []
- a. Value propositions
 - b. Profit margins
 - c. Customer relationships
 - d. Revenue streams
11. **An innovative business model is characterized by:** []
- a. Replicating existing strategies
 - b. Prioritizing short-term gains
 - c. Offering disruptive value propositions
 - d. Minimizing risks
12. **The Ansoff Matrix helps organizations:** []
- a. Define their mission statements
 - b. Understand competitive forces
 - c. Identify growth strategies
 - d. Manage organizational structure
13. **A company pursuing a differentiation strategy focuses on:** []
- a. Offering unique and superior products or services
 - b. Achieving the lowest production costs
 - c. Targeting niche markets exclusively
 - d. Reducing all expenses


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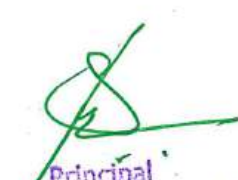
14. What is a key aspect of scenario planning? []
- a. Setting unrealistic goals
 - b. Ignoring market trends
 - c. Preparing for multiple potential future events
 - d. Focusing on a single strategy
15. Cost leadership strategies emphasize: []
- a. Premium pricing
 - b. Highly unique products
 - c. Efficient operations and reduced expenses
 - d. Niche market focus
16. Market positioning involves: []
- a. Ignoring competitors' strategies
 - b. Defining how a company wants to be perceived by customers
 - c. Eliminating all competition
 - d. Focusing solely on internal operations
17. Sustaining competitive advantage requires: []
- a. Continuous innovation and adaptation
 - b. Avoiding industry standards
 - c. Maintaining the status quo
 - d. Outsourcing all operations
18. Aligning organizational structure with strategy ensures: []
- a. Minimal resource utilization
 - b. Efficient execution of strategic goals
 - c. Increased employee turnover
 - d. Reduced focus on innovation
19. Effective change management involves: []
- a. Avoiding employee involvement
 - b. Addressing resistance and fostering adaptability
 - c. Implementing changes abruptly
 - d. Ignoring stakeholder feedback
20. Key Performance Indicators (KPIs) should be: []
- a. Quantifiable and relevant to strategic goals
 - b. Broad and abstract
 - c. Limited to financial metrics
 - d. Unrelated to business objectives
21. Strategic control systems help in: []
- a. Formulating initial strategies
 - b. Eliminating all risks
 - c. Monitoring and evaluating strategy performance
 - d. Ignoring market changes


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22. Continuous improvement focuses on: []
- a. Short-term gains
 - b. Rigid adherence to existing strategies
 - c. Using feedback to refine and enhance strategies
 - d. Avoiding risks
23. A growth strategy focused on entering new markets is called: []
- a. Product development
 - b. Market penetration
 - c. Market expansion
 - d. Diversification
24. Diversification involves: []
- a. Expanding into different products or industries
 - b. Reducing operational costs
 - c. Increasing reliance on a single product
 - d. Ignoring market trends
25. One common challenge in scaling a business is: []
- a. Maintaining consistent quality across larger operations
 - b. Reducing customer base
 - c. Decreasing innovation efforts
 - d. Ignoring employee needs
26. Strategic risks include all of the following EXCEPT: []
- a. Market risks
 - b. Operational risks
 - c. Organizational structure
 - d. Financial risks
27. Risk mitigation strategies aim to: []
- a. Minimize potential negative impacts
 - b. Avoid all risks entirely
 - c. Prioritize short-term profits
 - d. Eliminate competitors
28. Strategic flexibility allows organizations to: []
- a. Adapt to dynamic market conditions
 - b. Follow rigid processes
 - c. Ignore external trends
 - d. Avoid innovation
29. Porter's Five Forces include all of the following EXCEPT: []
- a. Bargaining power of suppliers
 - b. Threat of new entrants
 - c. Threat of substitutes
 - d. Technological advancement


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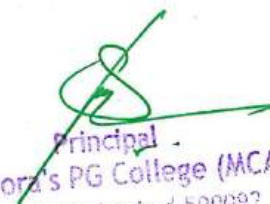
30. Which framework prioritizes creating untapped market spaces? []
- a. Ansoff Matrix
 - b. SWOT Analysis
 - c. Blue Ocean Strategy
 - d. BCG Matrix
31. Ansoff Matrix includes which of the following strategies? []
- a. Market penetration
 - b. Resource allocation
 - c. Organizational restructuring
 - d. Competitive benchmarking
32. The BCG Matrix categorizes business units based on: []
- a. Cost efficiency and market presence
 - b. Employee productivity
 - c. Market growth and market share
 - d. Revenue and profit margins
33. A strong mission statement is: []
- a. Clear, concise, and focused on purpose
 - b. Broad and undefined
 - c. Only financially oriented
 - d. Irrelevant to stakeholders
34. External analysis is critical for: []
- a. Understanding factors influencing the business environment
 - b. Monitoring internal strengths
 - c. Increasing operational costs
 - d. Managing employee relations
35. Strategic management in startups often requires: []
- a. Ignoring competition
 - b. High adaptability to changing conditions
 - c. Replicating corporate strategies
 - d. Focusing only on short-term outcomes
36. Competitive strategies involve all EXCEPT: []
- a. Ignoring customer preferences
 - b. Differentiating products
 - c. Achieving cost leadership
 - d. Focusing on niche markets
37. A business model describes: []
- a. How an organization creates, delivers, and captures value
 - b. Internal employee management
 - c. Daily operational tasks
 - d. Marketing campaigns exclusively


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38. The primary focus of SWOT analysis is to: []
- a. Predict future profits
 - b. Eliminate competitors
 - c. Identify internal strengths and weaknesses, and external opportunities and threats
 - d. Prioritize financial data
39. Effective strategy implementation requires: []
- a. Clear communication and alignment across the organization
 - b. Avoiding employee involvement
 - c. Delayed execution plans
 - d. Ignoring resource allocation
40. A sustainable competitive advantage is achieved by: []
- a. Offering unique value that is difficult to replicate
 - b. Competing only on price
 - c. Following industry norms
 - d. Reducing innovation
41. PESTEL analysis includes all EXCEPT: []
- a. Political factors
 - b. Environmental factors
 - c. Technological advancements
 - d. Internal resources
42. Scenario planning primarily helps in: []
- a. Ignoring market volatility
 - b. Sticking to rigid strategies
 - c. Anticipating and preparing for future uncertainties
 - d. Avoiding long-term planning
43. Market expansion strategies focus on: []
- a. Reducing workforce
 - b. Reaching new geographic or demographic segments
 - c. Prioritizing internal operations
 - d. Ignoring existing customer base
44. Blue Ocean Strategy aims to: []
- a. Compete within crowded markets
 - b. Reduce marketing expenses
 - c. Create uncontested market space
 - d. Follow industry norms
45. Innovative business models often involve: []
- a. Copying competitors
 - b. Focusing only on cost reduction
 - c. Redefining value creation and delivery
 - d. Avoiding technological advancements


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- 46. Strategic objectives should always be:** []
- a. Aligned with the vision and mission
 - b. Based only on past performance
 - c. General and abstract
 - d. Defined without metrics
- 47. Effective risk management involves:** []
- a. Ignoring external uncertainties
 - b. Identifying, assessing, and mitigating risks
 - c. Prioritizing profits over safety
 - d. Avoiding flexibility
- 48. Performance metrics should primarily:** []
- a. Measure progress toward strategic goals
 - b. Focus only on financial indicators
 - c. Be broad and undefined
 - d. Exclude employee contributions
- 49. Growth challenges often include:** []
- a. Decreased demand
 - b. Simplified operations
 - c. Managing resources effectively during scaling
 - d. Ignoring market changes
- 50. Continuous improvement is driven by:** []
- a. Avoiding feedback
 - b. Maintaining current strategies
 - c. Regularly analyzing performance and adapting
 - d. Focusing solely on financial gains



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1.2.1. Certificate/Value Added Courses

Question Paper

13. Certificate Program on Investment Risk Management

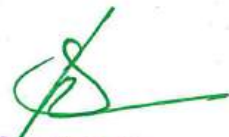
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB206	Certificate Program on Investment Risk Management		Max Marks:50	Time: 1 Hr

Date :12.08.2022


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

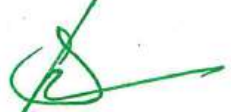
1. What is the primary goal of investment risk management? []
a) Maximizing profits
b) Minimizing potential losses
c) Increasing portfolio size
d) Avoiding all investments
2. Which type of risk involves changes in market prices like equity and interest rates? []
a) Operational Risk
b) Credit Risk
c) Market Risk
d) Liquidity Risk
3. What is an example of liquidity risk? []
a) A borrower defaults on a loan
b) An investor unable to sell an asset quickly at its fair value
c) Fluctuations in currency exchange rates
d) Failure of internal processes
4. What is a common method used to measure market risk? []
a) Stress Testing
b) Value at Risk (VaR)
c) Credit Scoring
d) Delphi Method
5. Which is NOT a type of credit risk? []
a) Counterparty Risk
b) Default Risk
c) Funding Liquidity Risk
d) Market Liquidity Risk


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6. **What statistical measure indicates the average deviation from the mean in a dataset?** []
a) Standard Deviation
b) Variance
c) Probability Distribution
d) Correlation
7. **In stress testing, what is analyzed?** []
a) Day-to-day market movements
b) Impact of extreme scenarios on investments
c) Operational system failures
d) Risk-free rate changes
8. **Which technique involves spreading investments to reduce risk?** []
a) Hedging
b) Scenario Planning
c) Diversification
d) Value at Risk
9. **What is the Delphi method?** []
a) A quantitative technique
b) A machine learning algorithm
c) A consensus-building method using expert judgment
d) A type of stress testing
10. **What does "hedging" in investments aim to achieve?** []
a) Maximizing returns
b) Protecting against potential losses
c) Increasing risk exposure
d) Simplifying portfolios
11. **What is the main difference between strategic and tactical asset Allocation?** []
a) Strategic focuses on long-term goals, while tactical is short-term adjustments
b) Tactical focuses on diversification, while strategic avoids it
c) Strategic uses options and futures, while tactical does not
d) Tactical involves machine learning, while strategic does not
12. **Which tool uses statistical models to predict risk trends?** []
a) Scenario Analysis
b) Risk Mapping
c) Predictive Analytics
d) Standard Deviation
13. **What is a key component of a risk management framework?** []
a) Defining risk tolerance
b) Increasing leverage
c) Avoiding diversification
d) Ignoring regulations
14. **What is Basel III primarily concerned with?** []
a) Increasing market liquidity
b) Strengthening financial institutions' capital requirements
c) Promoting ESG investing
d) Developing machine learning tools


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15. Which regulation primarily governs risk management practices in the U.S.? []
a) Basel III
b) Solvency II)
c) Dodd-Frank Act
d) MiFID II
16. What is an advantage of using machine learning in risk management? []
a) Avoids the need for human judgment
b) Identifies complex patterns and trends in data
c) Guarantees no losses
d) Simplifies regulatory compliance
17. What does ESG stand for? []
a) Equity, Sustainability, Governance
b) Economic, Social, Governance
c) Environmental, Social, Governance
d) Energy, Sustainability, Growth
18. Which type of risk includes system failures and process inefficiencies? []
a) Credit Risk
b) Market Risk
c) Liquidity Risk
d) Operational Risk
19. Which scenario planning technique explores diverse future possibilities? []
a) Risk Mapping
b) Value at Risk
c) Scenario Analysis
d) Diversification
20. Which type of risk is associated with changes in interest rates? []
a) Credit Risk
b) Liquidity Risk
c) Operational Risk
d) Market Risk
21. Which tool is commonly used for portfolio optimization? []
a) Risk Mapping
b) Delphi Method
c) Risk Management Software
d) Credit Scoring
22. What is the focus of tactical asset allocation? []
a) Short-term market opportunities
b) Long-term investment strategies
c) Risk elimination
d) Machine learning
23. Which method is primarily qualitative? []
a) Standard Deviation
b) Expert Judgment
c) Value at Risk
d) Stress Testing


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24. **What is the purpose of compliance in risk management?** []
a) Reducing profits
b) Simplifying investment strategies
c) Avoiding diversification
d) Adhering to regulatory standards
25. **What is "funding liquidity risk"?** []
a) Inability to execute a trade
b) Inability to meet short-term obligations
c) Default by a counterparty
d) Risk from fluctuating exchange rates
26. **Which statistical measure calculates the squared deviations from the mean?** []
a) Standard Deviation
b) Variance
c) Probability Distribution
d) Correlation
27. **Which type of investment strategy seeks to mitigate losses using derivatives like options and futures?** []
a) Diversification
b) Asset Allocation
c) Hedging
d) Scenario Planning
28. **What is a key advantage of diversification?** []
a) Reduces portfolio risk by spreading investments
b) Maximizes short-term profits
c) Focuses on a single market segment
d) Eliminates the need for risk assessment
29. **What does Value at Risk (VaR) measure?** []
a) The operational efficiency of a firm
b) Potential loss in value of an asset or portfolio over a set period
c) Long-term portfolio performance
d) The regulatory compliance of an investment strategy
30. **What is the primary focus of operational risk management?** []
a) Mitigating risks from internal processes and systems
b) Addressing market volatility
c) Avoiding credit defaults
d) Enhancing liquidity
31. **Which of the following is a predictive analytics tool in risk management?** []
a) Delphi Method
b) Stress Testing
c) Machine Learning Models
d) Value at Risk
32. **What does stress testing evaluate?** []
a) Routine market changes
b) Impact of extreme financial scenarios
c) Currency fluctuations
d) Variance in portfolio returns


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33. **What is a characteristic of market liquidity risk?** []
 a) Inability to sell an asset without affecting its price
 b) Default on a loan
 c) System failure in operations
 d) Volatility in currency exchange rates
34. **How is risk categorization useful?** []
 a) Guarantees compliance
 b) Avoids complex risk modeling
 c) Organizes risks into manageable groups for analysis
 d) Simplifies investment decisions
35. **What is the role of expert judgment in qualitative risk assessment?** []
 a) Ensures regulatory adherence
 b) Replaces quantitative analysis
 c) Provides insights based on professional experience
 d) Reduces portfolio size
36. **What is the purpose of a risk management framework?** []
 a) Establishing guidelines for identifying, assessing, and mitigating risks
 b) Focusing on profit maximization
 c) Avoiding diversification
 d) Simplifying asset allocation
37. **What is an example of counterparty risk?** []
 a) A borrower fails to repay a loan
 b) A trading partner defaults on a contract
 c) An investor cannot sell an asset
 d) Fluctuations in interest rates
38. **Which regulatory standard focuses on financial institutions' liquidity and capital adequacy?** []
 a) Dodd-Frank Act
 b) MiFID II
 c) Basel III
 d) ESG Regulations
39. **Which strategy adjusts investments based on changing market conditions?** []
 a) Strategic Asset Allocation
 b) Hedging
 c) Diversification
 d) Tactical Asset Allocation
40. **What is funding liquidity?** []
 a) The ability to sell an asset quickly
 b) The ability to meet financial obligations when due
 c) Default risk from borrowers
 d) Impact of operational failures
41. **What is a characteristic of scenario analysis?** []
 a) Explores potential outcomes under various hypothetical scenarios
 b) Focuses on statistical risk measurement
 c) Guarantees accurate predictions
 d) Eliminates credit risk


42. Which tool is specifically designed for portfolio optimization? []
- a) Stress Testing
 - b) Risk Management Software
 - c) Delphi Method
 - d) Compliance Reports
43. What does ESG risk management focus on? []
- a) Enhancing liquidity
 - b) Maximizing profits
 - c) Addressing environmental, social, and governance issues
 - d) Eliminating market volatility
44. How do regulations like the Dodd-Frank Act influence risk management? []
- a) Reduce the importance of diversification
 - b) Eliminate all market risks
 - c) Set compliance standards for financial institutions
 - d) Encourage speculative investments
45. What is the Delphi method used for in risk management? []
- a) Gaining consensus among experts
 - b) Calculating standard deviation
 - c) Hedging against market risk
 - d) Regulatory compliance
46. Which risk involves a failure in technology or processes? []
- a) Market Risk
 - b) Operational Risk
 - c) Credit Risk
 - d) Liquidity Risk
47. What is the purpose of predictive analytics in risk management? []
- a) Simplifying decision-making
 - b) Forecasting potential risks based on data trends
 - c) Increasing compliance burden
 - d) Eliminating the need for stress testing
48. What does "market risk" encompass? []
- a) Failures in internal processes
 - b) Lack of liquidity
 - c) Default by counterparties
 - d) Volatility in equities, interest rates, and currencies
49. Which strategy involves using options or futures to offset potential losses? []
- a) Diversification
 - b) Asset Allocation
 - c) Risk Mapping
 - d) Hedging
50. What is the main advantage of a well-defined risk management plan? []
- a) Maximizes returns
 - b) Eliminates all risks
 - c) Balances risk and return to achieve investment goals
 - d) Simplifies compliance processes



1.2.1. Certificate/Value Added Courses

Question Paper

14. Certificate Program on Python for IoT

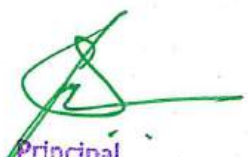
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC208	Certificate Program on Python for IoT		Max Marks:50	Time: 1 Hr

Date :22.11.2022

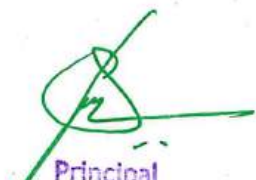
Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

1. **What is the primary role of Python in IoT development?** []
 - a) Database management
 - b) Hardware manufacturing
 - c) Programming and interfacing devices
 - d) Network setup
2. **Which Python data type is used to store text?** []
 - a) int
 - b) float
 - c) bool
 - d) str
3. **What is an advantage of Python in IoT projects?** []
 - a) High speed
 - b) Ease of use and extensive libraries
 - c) Low-level hardware control
 - d) High memory usage
4. **Which control structure in Python is used for decision-making?** []
 - a) for loop
 - b) while loop
 - c) if-else
 - d) try-except
5. **What is required to set up a Python IoT development environment?** []
 - a) IDE, libraries, and Python interpreter
 - b) Only a programming IDE
 - c) Only hardware
 - d) Cloud storage


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6. Which of the following is a common IoT platform? []
a) Intel Xeon
b) NVIDIA RTX
c) Raspberry Pi
d) AMD Ryzen
7. What is the purpose of GPIO pins on a Raspberry Pi? []
a) Network communication
b) Power supply
c) Display output
d) Interfacing sensors and actuators
8. Which library is commonly used for interfacing hardware with Python? []
a) pandas
b) RPi.GPIO
c) NumPy
d) matplotlib
9. Which sensor measures temperature? []
a) LDR
b) DHT11
c) Ultrasonic sensor
d) DC motor
10. Before testing sensors, what is the first step? []
a) Install necessary drivers and libraries
b) Write data logging code
c) Implement cloud integration
d) Design a dashboard
11. Which Python function reads data from a sensor? []
a) print()
b) input()
c) scan()
d) fetch()
12. What is a key principle of sensor data acquisition? []
a) Storing data in XML format
b) Encrypting data
c) Using binary sensors only
d) Converting analog signals to digital
13. Which library is used for data visualization in Python? []
a) requests
b) json
c) matplotlib
d) csv


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14. What is the output of a digital temperature sensor? []
- a) Voltage
 - b) Digital data
 - c) Current
 - d) Frequency
15. How do you visualize real-time sensor data in Python? []
- a) Using numpy
 - b) Storing it in CSV files
 - c) Using live plots with matplotlib
 - d) Encrypting the data
16. Which actuator type is used for rotational motion? []
- a) Relay
 - b) Motor
 - c) Buzzer
 - d) LED
17. What is the primary library for motor control in Python? []
- a) pandas
 - b) matplotlib
 - c) sklearn
 - d) RPi.GPIO
18. How do you control an actuator in Python? []
- a) Run a cron job
 - b) Send control signals via GPIO
 - c) Store data in a database
 - d) Visualize data
19. What is an example of dynamic actuator control? []
- a) Controlling a fan based on temperature readings
 - b) Turning on an LED at a specific time
 - c) Sending MQTT messages
 - d) Logging data to a cloud
20. What is the default state of an actuator when no signal is sent? []
- a) On
 - b) Off
 - c) Pulsing
 - d) Rotating
21. What does MQTT stand for? []
- a) Main Queue Telemetry Transport
 - b) Message Queuing Telemetry Transport
 - c) Messaging Query Transport Tool
 - d) Main Quality Telemetry Transport

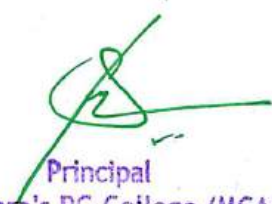
- 22. Which protocol is best for real-time messaging in IoT?** []
- a) FTP
 - b) POP3
 - c) SMTP
 - d) MQTT
- 23. What is the role of a broker in MQTT?** []
- a) Storing data
 - b) Visualizing data
 - c) Managing message transmission
 - d) Securing communication
- 24. Which HTTP method is commonly used for data transmission in IoT?** []
- a) GET
 - b) POST
 - c) PUT
 - d) Both GET and POST
- 25. What is a key feature of MQTT?** []
- a) File transfer
 - b) Lightweight messaging protocol
 - c) High latency
 - d) Complex setup
- 26. Which Python library is used to store data in databases?** []
- a) matplotlib
 - b) sklearn
 - c) sqlite3
 - d) RPi.GPIO
- 27. What format is commonly used for storing IoT data locally?** []
- a) HTML
 - b) CSV
 - c) JPEG
 - d) DOCX
- 28. What is a benefit of using cloud storage for IoT data?** []
- a) Reduced security
 - b) Dependency on local servers
 - c) High costs
 - d) Scalability and remote access
- 29. How can Python retrieve stored IoT data?** []
- a) Using HTTP requests
 - b) By directly controlling GPIO pins
 - c) Querying databases or reading files
 - d) Through MQTT messages

30. Which library is used for cloud data storage integration? []
- a) matplotlib
 - b) RPi.GPIO
 - c) numpy
 - d) boto3
31. Which Python library is used for data analysis? []
- a) matplotlib
 - b) pandas
 - c) requests
 - d) json
32. How do you create a line chart in Python? []
- a) Using matplotlib.pyplot.plot()
 - b) Using pandas functions
 - c) By installing an external plugin
 - d) By storing data in CSV
33. Which type of chart is best for comparing categorical data? []
- a) Line chart
 - b) Scatter plot
 - c) Bar chart
 - d) Histogram
34. What is a common use of statistical techniques in IoT? []
- a) Controlling actuators
 - b) Analyzing patterns in sensor data
 - c) Storing data
 - d) Encrypting messages
35. Which Python library is commonly used for machine learning? []
- a) matplotlib
 - b) pandas
 - c) scikit-learn
 - d) sqlite3
36. What is a key security concern in IoT systems? []
- a) Low latency
 - b) Data breaches
 - c) High cost
 - d) Large storage needs
37. Which encryption method is commonly used in IoT? []
- a) Base64
 - b) SQL
 - c) CSV
 - d) AES


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- 38. How can authentication be implemented in Python IoT projects?** []
- a) Using try-except blocks
 - b) By disabling GPIO pins
 - c) With libraries like pyjwt for token-based authentication
 - d) Using matplotlib
- 39. What is a secure communication protocol for IoT?** []
- a) HTTPS
 - b) FTP
 - c) HTTP
 - d) POP3
- 40. What is the role of public and private keys in IoT?** []
- a) Visualization
 - b) Encryption and authentication
 - c) Data analysis
 - d) Controlling actuators
- 41. What is the first step in building an IoT application?** []
- a) Deploying to the cloud
 - b) Testing hardware
 - c) Designing the architecture
 - d) Visualizing data
- 42. Which Python framework is used for web-based IoT applications?** []
- a) Flask
 - b) matplotlib
 - c) pandas
 - d) NumPy
- 43. What is an essential component of an IoT application?** []
- a) Data visualization
 - b) Hardware interfacing
 - c) Both hardware and software integration
 - d) Remote storage
- 44. What tool can be used for debugging IoT applications?** []
- a) Excel
 - b) Jupyter Notebook
 - c) SQL queries
 - d) Python debugger (pdb)
- 45. Why is testing IoT applications critical?** []
- a) To reduce storage needs
 - b) To ensure reliability and performance
 - c) For data visualization
 - d) For actuator control

- 46. Which is a real-world deployment strategy for IoT applications?** []
- a) Local-only execution
 - b) Using containerization tools like Docker
 - c) Manual hardware updates
 - d) Avoiding scaling
- 47. What is the benefit of scaling IoT devices?** []
- a) Lower power consumption
 - b) Limited deployment
 - c) Reduced security
 - d) Handling more devices and data
- 48. Which tool is used for managing multiple IoT devices?** []
- a) matplotlib
 - b) pandas
 - c) IoT platforms like AWS IoT or Azure IoT
 - d) Jupyter Notebook
- 49. What is the role of edge computing in IoT?** []
- a) Storing data in the cloud
 - b) Processing data closer to the source
 - c) Encrypting data
 - d) Deploying actuators
- 50. What should a complete IoT deployment include?** []
- a) Only cloud integration
 - b) Only local database storage
 - c) End-to-end integration of hardware, software, and communication
 - d) Only sensor data acquisition



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1.2.1. Certificate/Value Added Courses

Question Paper

15. Bridge Course on Fundamentals of Statistics


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	BMB101	Bridge Course on Fundamentals of Statistics	Max Marks:50	Time: 1 Hr	

Date :22.11.2022

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

1. **What is the primary goal of statistics?** []
 - a) To manipulate data
 - b) To collect, analyze, and interpret data
 - c) To make data visualizations
 - d) To predict future events
2. **Which of the following is qualitative data?** []
 - a) Age of students
 - b) Gender of participants
 - c) Height of basketball players
 - d) Exam scores
3. **Which level of measurement is associated with ordered categories with no meaningful difference between values?** []
 - a) Nominal
 - b) Ordinal
 - c) Interval
 - d) Ratio
4. **The temperature in Celsius is an example of which level of measurement?** []
 - a) Nominal
 - b) Ordinal
 - c) Interval
 - d) Ratio
5. **Which of the following is NOT a scope of statistics?** []
 - a) Decision-making
 - b) Data collection
 - c) Infinite certainty
 - d) Trend analysis


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6. **What is the arithmetic average of a dataset called?** []
a) Mode
b) Mean
c) Median
d) Range
7. **What measure divides the dataset into two equal parts?** []
a) Mean
b) Mode
c) Median
d) Standard deviation
8. **Which measure of dispersion represents the difference between the maximum and minimum values?** []
a) Variance
b) Range
c) Standard deviation
d) Interquartile range
9. **What graphical representation is most suitable for categorical data?** []
a) Histogram
b) Scatter plot
c) Bar chart
d) Box plot
10. **A box plot is primarily used to display:** []
a) Frequency distributions
b) Measures of central tendency
c) Data spread and outliers
d) Probabilities
11. **What is the set of all possible outcomes of a random experiment?** []
a) Event
b) Trial
c) Probability space
d) Sample space
12. **If two events cannot occur simultaneously, they are said to be:** []
a) Independent
b) Mutually exclusive
c) Complementary
d) Certain
13. **The probability of an event happening is always between:** []
a) 0 and 10
b) -1 and 1
c) 0 and 1
d) None of the above

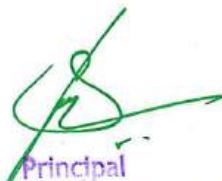
14. What is the probability of flipping a coin and getting heads or tails? []
- a) 0.25
 - b) 0.5
 - c) 2.0
 - d) 1.0
15. Which rule applies to finding the probability of two independent events happening together? []
- a) Addition rule
 - b) Complement rule
 - c) Multiplication rule
 - d) Bayes' theorem
16. Which of the following is a discrete probability distribution? []
- a) Normal distribution
 - b) Binomial distribution
 - c) Exponential distribution
 - d) Chi-square distribution
17. A normal distribution is symmetric around its: []
- a) Median
 - b) Mode
 - c) Mean
 - d) All of the above
18. The probability of success in a binomial distribution is denoted by: []
- a) p
 - b) q
 - c) n
 - d) $1 - p$
19. What shape does the normal distribution curve have? []
- a) Rectangular
 - b) Triangular
 - c) Skewed
 - d) Bell-shaped
20. Which property is true for a normal distribution? []
- a) It is skewed right
 - b) The mean, median, and mode are equal
 - c) It is defined only for positive values
 - d) It has no variance
21. Which sampling method ensures every member of the population has an equal chance of being selected? []
- a) Stratified sampling
 - b) Cluster sampling
 - c) Random sampling
 - d) Convenience sampling

22. The Central Limit Theorem states that the sampling distribution of the sample mean: []
- a) Is always uniform
 - b) Is normally distributed for a large sample size
 - c) Is skewed
 - d) Is binomial
23. Which sampling method divides the population into groups and randomly selects entire groups? []
- a) Random sampling
 - b) Stratified sampling
 - c) Cluster sampling
 - d) Systematic sampling
24. A statistic calculated from a sample is called: []
- a) Parameter
 - b) Estimator
 - c) Population metric
 - d) Confidence interval
25. What is the purpose of sampling? []
- a) To avoid data collection
 - b) To manipulate data
 - c) To reduce biases completely
 - d) To study a part to infer about the whole
26. The null hypothesis (H_0) typically states: []
- a) A significant relationship exists
 - b) There is no effect or difference
 - c) Data is skewed
 - d) Results are inconclusive
27. A Type I error occurs when: []
- a) The null hypothesis is true but rejected
 - b) The null hypothesis is false but accepted
 - c) The alternative hypothesis is rejected
 - d) The p-value is large
28. What does ANOVA test for? []
- a) Differences in proportions
 - b) Differences between multiple means
 - c) Relationships between variables
 - d) Equality of medians
29. A chi-square test is used to analyze: []
- a) Means of two groups
 - b) Variances
 - c) Continuous data
 - d) Categorical data

30. The significance level (alpha) is usually set at: []
a) 0.1
b) 0.05
c) 0.01
d) 1.0
31. A Pearson correlation coefficient of 0 indicates: []
a) Perfect positive correlation
b) Weak correlation
c) Perfect negative correlation
d) No correlation
32. The dependent variable in regression analysis is also called: []
a) Predictor variable
b) Outcome variable
c) Independent variable
d) Covariate
33. In multiple regression, the number of predictors is: []
a) One
b) Two
c) More than one
d) Any number
34. The slope in a simple linear regression represents: []
a) The y-intercept
b) Change in the dependent variable per unit change in the independent variable
c) The correlation coefficient
d) The standard error
35. The correlation coefficient ranges between: []
a) -2 to 2
b) 0 to 1
c) -1 to 1
d) -0.5 to 0.5
36. Which software is specifically designed for statistical analysis? []
a) Excel
b) PowerPoint
c) Photoshop
d) SPSS
37. What is the first step when working with data in software? []
a) Visualizing the data
b) Importing and cleaning the data
c) Performing hypothesis testing
d) Creating complex models

38. Which software is open-source and widely used for statistical Programming? []
- a) R
 - b) SPSS
 - c) SAS
 - d) Minitab
39. In Excel, which function calculates the mean? []
- a) =MEAN()
 - b) =MEDIAN()
 - c) =MODE()
 - d) =AVERAGE()
40. Which plot is easily created in most statistical software? []
- a) Geographic maps
 - b) Box plot
 - c) 3D scatter plot
 - d) Flowchart
41. Case studies in statistics often involve: []
- a) Large theoretical data
 - b) Hypothetical scenarios
 - c) Real-world data analysis
 - d) Unrealistic assumptions
42. The first step in analyzing real-world data is: []
- a) Visualization
 - b) Cleaning and preparation
 - c) Hypothesis testing
 - d) Regression analysis
43. Statistical reports should always include: []
- a) Raw data only
 - b) Only graphs
 - c) Software commands
 - d) Interpretation of results
44. In a case study, hypothesis testing is used to: []
- a) Confirm or reject assumptions
 - b) Clean data
 - c) Perform advanced modeling
 - d) Find missing data
45. Statistical methods help in decision-making by: []
- a) Eliminating all risks
 - b) Providing evidence-based insights
 - c) Reducing computation time
 - d) Predicting with certainty

46. **Advanced topics in statistics include:** []
- a) Bayesian analysis
 - b) Mean calculation
 - c) Bar chart creation
 - d) Sampling methods
47. **Reviewing key concepts ensures:** []
- a) Mastery of advanced topics
 - b) Better application of statistical methods
 - c) Avoiding software usage
 - d) Fewer errors in graphs
48. **Future directions in statistics often involve:** []
- a) Traditional methods only
 - b) Avoiding new technologies
 - c) Big data and machine learning
 - d) Focusing solely on descriptive statistics
49. **Recap sessions are useful for:** []
- a) Learning completely new material
 - b) Reinforcing previously learned concepts
 - c) Avoiding practical applications
 - d) Memorizing software commands
50. **Which is a key feature of modern statistical advancements?** []
- a) Decline in data importance
 - b) Reducing computational power
 - c) Focus only on theory
 - d) Integration with artificial intelligence



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1.2.1. Certificate/Value Added Courses

Question Paper

16.Certificate Program on Ethical Hacking

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC207	Certificate Program on Ethical Hacking		Max Marks:50	Time: 1 Hr

Date : 30.12.2022

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	


Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What is the primary goal of ethical hacking?** []
 - a) To cause system downtime
 - b) To secure systems by identifying vulnerabilities
 - c) To create malware
 - d) To exploit systems for personal gain
2. **Which of the following is NOT a type of hacking?** []
 - a) White-hat hacking
 - b) Green-hat hacking
 - c) Black-hat hacking
 - d) Gray-hat hacking
3. **Which of these is a key ethical consideration for penetration testers?** []
 - a) Exploiting vulnerabilities for personal gain
 - b) Conducting tests without permission
 - c) Maintaining confidentiality of client data
 - d) Sharing vulnerabilities publicly without consent
4. **What does the scope of a penetration test define?** []
 - a) The list of tools used
 - b) The permissions granted by the client
 - c) The attack methods to avoid
 - d) The boundaries of the testing activities
5. **Which of these activities is typically illegal unless authorized?** []
 - a) White-hat hacking
 - b) Gray-hat hacking
 - c) Black-hat hacking
 - d) Ethical hacking



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6. **What is the purpose of setting up a controlled testing environment?** []
a) To protect live systems from accidental damage
b) To expose sensitive client data
c) To avoid legal requirements
d) To bypass security measures
7. **Which of these tools is commonly used in penetration testing?** []
a) Microsoft Excel
b) Wireshark
c) Adobe Photoshop
d) SAP ERP
8. **Why is a secure testing environment important?** []
a) To ensure test results are accurate
b) To prevent test activities from impacting production systems
c) To avoid data breaches during testing
d) All of the above
9. **What is one best practice for maintaining a secure testing environment?** []
a) Testing on production servers
b) Isolating test systems from production systems
c) Using outdated testing tools
d) Sharing credentials freely
10. **Which software is essential for creating virtual testing environments?** []
a) VMware or VirtualBox
b) Microsoft Word
c) Google Chrome
d) Apache Web Server
11. **What is the primary purpose of reconnaissance?** []
a) To launch an attack
b) To gather information about a target
c) To exploit vulnerabilities
d) To delete logs
12. **Which technique involves gathering publicly available information about a target?** []
a) Active scanning
b) Passive reconnaissance
c) Exploitation
d) Privilege escalation
13. **Which tool is widely used for network scanning?** []
a) Burp Suite
b) Metasploit
c) Nmap
d) Nessus
14. **What does enumeration typically focus on?** []
a) Identifying specific vulnerabilities in a system
b) Collecting usernames, groups, and shared resources
c) Executing privilege escalation attacks
d) Disabling antivirus software

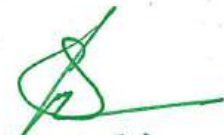
15. **What is the goal of footprinting?** []
a) To remove traces of an attack
b) To understand the network structure of the target
c) To gain administrator access
d) To install malware
16. **What is vulnerability assessment primarily used for?** []
a) Exploiting vulnerabilities
b) Identifying potential security issues
c) Gaining persistence in a system
d) Deleting logs of attacks
17. **Which tool is commonly used for vulnerability scanning?** []
a) Nessus
b) Wireshark
c) Metasploit
d) Nmap
18. **What should be the first step after a vulnerability scan?** []
a) Exploit the vulnerabilities
b) Document the vulnerabilities
c) Prioritize remediation efforts
d) Perform a system restart
19. **Which of the following is NOT an output of a vulnerability scanner?** []
a) Open ports
b) Exploit code
c) Weak configurations
d) Known vulnerabilities
20. **What is the main goal of prioritizing vulnerabilities?** []
a) To determine which vulnerabilities are the easiest to exploit
b) To focus on vulnerabilities that pose the highest risk
c) To decide which tools to use for exploitation
d) To identify all low-risk vulnerabilities first
21. **Which of the following tools is commonly used for exploitation?** []
a) Nessus
b) Metasploit
c) Wireshark
d) Snort
22. **What is privilege escalation?** []
a) Gaining unauthorized higher-level access within a system
b) Scanning the network for open ports
c) Crashing a system to cause downtime
d) Creating new vulnerabilities in a system
23. **Which of these is considered an ethical approach to exploitation?** []
a) Using malware to exploit vulnerabilities
b) Exploiting vulnerabilities only in an authorized testing environment
c) Targeting live systems without permission
d) Sharing exploit scripts online


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24. **What is the main purpose of documenting exploitation methods?** []
a) To assist attackers in their activities
b) To provide clients with evidence of vulnerabilities and risks
c) To prevent detection of the tester's activities
d) To identify untested systems
25. **What is a buffer overflow exploit?** []
a) Exploiting a lack of encryption
b) Overwriting a program's memory to execute malicious code
c) Injecting malicious SQL queries
d) Bypassing a network firewall
26. **What is the primary goal of post-exploitation activities?** []
a) To crash the system
b) To maintain access and gather additional information
c) To ensure vulnerabilities remain unpatched
d) To conduct denial-of-service attacks
27. **Which of the following is an example of a persistence technique?** []
a) Creating backdoor account
b) Performing vulnerability scans
c) Logging out after an exploit
d) Running a denial-of-service attack
28. **What is lateral movement in a compromised network?** []
a) Spreading ransomware across systems
b) Moving from one compromised system to another to gain higher privileges
c) Blocking user access to systems
d) Restarting the target system
29. **What is one method for covering tracks in post-exploitation?** []
a) Deleting logs
b) Leaving visible exploit scripts
c) Not encrypting communications
d) Not documenting actions
30. **Why is documentation critical during post-exploitation activities?** []
a) To help others exploit the system later
b) To provide evidence of the impact of vulnerabilities
c) To avoid prosecution
d) To hide the tester's identity
31. **Which of the following is a common web application vulnerability?** []
a) SQL Injection
b) Buffer overflow
c) ARP poisoning
d) WPA2 cracking
32. **What does XSS stand for?** []
a) Extended Secure Sockets
b) Cross-Site Scripting
c) Cross-Server Security
d) XML Secure Scripting


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33. **What is the primary goal of web application penetration testing?** []
a) To crash the application
b) To identify vulnerabilities in the web application
c) To slow down the server
d) To modify user data permanently
34. **Which tool is commonly used for web application testing?** []
a) Burp Suite
b) Nmap
c) Wireshark
d) Nessus
35. **What is CSRF in web application security?** []
a) Cross-Site Request Forgery
b) Client-Side Resource Finder
c) Content-Side Response Failure
d) Cross-Site Resource Filter
36. **Which of the following is a common network vulnerability?** []
a) Weak encryption protocols
b) Lack of SQL validation
c) Unvalidated input fields
d) Missing firewalls on browsers
37. **What is the purpose of wireless penetration testing?** []
a) To gain access to unprotected Wi-Fi networks
b) To identify vulnerabilities in wireless networks
c) To delete Wi-Fi configuration files
d) To disable other users on the network
38. **Which tool is often used for wireless network security testing?** []
a) Aircrack-ng
b) Nessus
c) Metasploit
d) Nmap
39. **What is WPA2 cracking?** []
a) Exploiting a vulnerability in WPA2 encryption to gain network access
b) Sending spam packets over a network
c) Disabling all Wi-Fi-connected devices
d) Creating a new WPA2 protocol
40. **What is network sniffing?** []
a) Sending large packets to crash a server
b) Intercepting and analyzing network traffic
c) Changing router configurations without permission
d) Deleting a network's encryption key
41. **What is the primary purpose of a penetration testing report?** []
a) To document successful exploitation only
b) To communicate findings and remediation recommendations to stakeholders
c) To provide exploit code for future use
d) To summarize testing tools used


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42. Which of the following should NOT be included in a penetration testing report? []
- a) Vulnerabilities identified
 - b) Detailed remediation steps
 - c) Exploitation techniques
 - d) Unapproved test results from unrelated systems
43. Why is it important to prioritize vulnerabilities in a report? []
- a) To make it easier to fix all vulnerabilities simultaneously
 - b) To focus on addressing the most critical risks first
 - c) To reduce the length of the report
 - d) To highlight exploits that were easiest to perform
44. Which of these is an essential skill for creating a penetration testing report? []
- a) Data analysis
 - b) Exploitation
 - c) Social engineering
 - d) Writing malware scripts
45. Who are the primary stakeholders for a penetration testing report? []
- a) Cybersecurity teams, executives, and IT staff
 - b) Hackers and exploit developers
 - c) Competitors of the organization
 - d) Government regulators only
46. Which of the following frameworks governs ethical hacking practices? []
- a) GDPR
 - b) PCI-DSS
 - c) Cybersecurity laws and industry standards
 - d) Agile development frameworks
47. Why is professional conduct important in ethical hacking? []
- a) To avoid legal repercussions and maintain client trust
 - b) To create new exploits
 - c) To hack into systems without being noticed
 - d) To avoid industry certifications
48. Which certification is recognized in the ethical hacking field? []
- a) CEH (Certified Ethical Hacker)
 - b) CISSP
 - c) PMP
 - d) ITIL
49. What should an ethical hacker always obtain before testing? []
- a) Exploit scripts
 - b) Legal authorization from the client
 - c) A list of critical systems to avoid
 - d) Permission to keep test results private
50. Continuous learning in cybersecurity is important because: []
- a) Security threats and technologies evolve rapidly
 - b) Certification renewal is expensive
 - c) New tools make old vulnerabilities irrelevant
 - d) It replaces practical experience in hacking



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1.2.1. Certificate/Value Added Courses

Question Paper

17.Training Program on Digital Tools for Business


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	TMB101	Training Program on Digital Tools for Business	Max Marks:50	Time: 1 Hr	

Date :31.12.2022

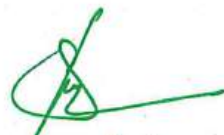
Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

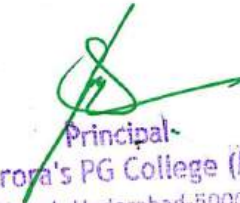
1. **What is digital transformation?** []
 - a) Automating tasks manually
 - b) The integration of digital technology into all areas of business
 - c) Learning to use smartphones for business
 - d) Replacing employees with robots
2. **Why are digital tools important in modern business?** []
 - a) They replace human labor entirely
 - b) They ensure compliance with all regulations
 - c) They enhance efficiency and productivity
 - d) They eliminate the need for marketing
3. **Which of the following is NOT a key category of digital tools?** []
 - a) Project management
 - b) Data analytics
 - c) Traditional advertising
 - d) Collaboration tools
4. **Which of the following is an example of project management software?** []
 - a) Microsoft Word
 - b) Trello
 - c) Zoom
 - d) Slack
5. **What is a primary feature of project management tools?** []
 - a) File compression
 - b) Planning and tracking projects
 - c) Conducting online meetings
 - d) Writing code


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6. **How do project management tools improve team collaboration?** []
a) By automating all tasks
b) By providing a centralized platform for tracking and updates
c) By replacing email communication entirely
d) By reducing the need for project deadlines
7. **Which tool is commonly used for remote communication?** []
a) Tableau
b) Zoom
c) Shopify
d) Google Analytics
8. **What is a best practice for remote communication?** []
a) Sending daily emails
b) Having clear guidelines for virtual meetings
c) Using multiple communication platforms at once
d) Avoiding video calls
9. **What feature supports version control in collaboration tools?** []
a) File history tracking
b) Instant messaging
c) Poll creation
d) Calendar integration
10. **Which tool is NOT used for data analytics?** []
a) Excel
b) Tableau
c) Slack
d) Google Analytics
11. **What is the first step in data analysis?** []
a) Data visualization
b) Data preparation and collection
c) Creating charts
d) Writing reports
12. **Why is data visualization important?** []
a) It simplifies decision-making by presenting insights visually
b) It eliminates the need for data collection
c) It ensures complete accuracy in data
d) It automates report creation
13. **Which platform is used for social media management?** []
a) HubSpot
b) Mailchimp
c) Hootsuite
d) Shopify

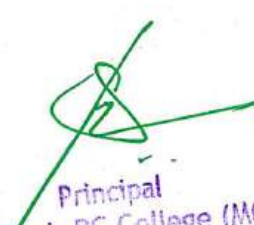

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14. What is a benefit of email marketing tools like Mailchimp? []
- a) Tracking campaign performance metrics
 - b) Selling products directly
 - c) Building e-commerce platforms
 - d) Managing employees
15. How can you measure the effectiveness of a digital marketing campaign? []
- a) Through analytics and KPIs
 - b) By increasing the number of emails sent
 - c) By creating more content than competitors
 - d) Using free tools only
16. What is a CRM system primarily used for? []
- a) Managing customer interactions and data
 - b) Running marketing campaigns
 - c) Tracking project progress
 - d) Processing payments
17. Which of the following is a popular CRM tool? []
- a) Microsoft Teams
 - b) Salesforce
 - c) Tableau
 - d) Shopify
18. How can CRM systems enhance customer relationships? []
- a) By automating marketing emails
 - b) By analyzing customer behavior to provide personalized service
 - c) By focusing only on sales
 - d) By increasing the number of customer complaints
19. What does cybersecurity aim to protect? []
- a) Marketing plans
 - b) Digital assets and data
 - c) Physical office equipment
 - d) Project schedules
20. Which of the following is NOT a cybersecurity best practice? []
- a) Using strong passwords
 - b) Ignoring software updates
 - c) Implementing multi-factor authentication
 - d) Educating employees on cyber risks
21. Why is regulatory compliance important in cybersecurity? []
- a) To ensure team collaboration
 - b) To avoid legal penalties and protect data integrity
 - c) To reduce marketing expenses
 - d) To simplify project timelines

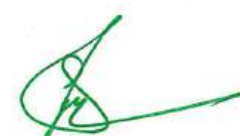

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22. What is an example of an e-commerce platform? []
- a) Shopify
 - b) Microsoft Excel
 - c) Asana
 - d) Tableau
23. Which of the following is essential for managing inventory in e-commerce?[]
- a) Payment processing software
 - b) Inventory tracking tools
 - c) Social media platforms
 - d) Video conferencing
24. What strategy is effective for online customer engagement? []
- a) Posting sporadic content
 - b) Personalizing customer interactions
 - c) Avoiding feedback channels
 - d) Reducing website speed
25. Which technology automates repetitive tasks? []
- a) Artificial Intelligence (AI)
 - b) Slack
 - c) Tableau
 - d) WooCommerce
26. What is a potential business application of blockchain? []
- a) Data visualization
 - b) Secure transaction management
 - c) Creating email campaigns
 - d) Video conferencing
27. How does IoT benefit businesses? []
- a) By connecting devices to improve data collection and analysis
 - b) By reducing the need for cybersecurity
 - c) By automating team collaboration
 - d) By enhancing traditional marketing methods
28. What is a critical step in implementing digital tools? []
- a) Developing a clear implementation plan
 - b) Skipping training sessions
 - c) Avoiding stakeholder involvement
 - d) Using all available tools simultaneously
29. Why is change management important in digital tool adoption? []
- a) To reduce employee turnover
 - b) To ensure a smooth transition and user acceptance
 - c) To increase hardware usage
 - d) To minimize communication


30. **What is the purpose of presenting an implementation plan to Stakeholders?** []
- a) To justify costs and gain approval
 - b) To avoid transparency
 - c) To eliminate feedback
 - d) To delay implementation
31. **What does digital transformation typically involve?** []
- a) Developing new traditional processes
 - b) Using digital technology to innovate and improve processes
 - c) Hiring more employees for manual work
 - d) Reducing the use of digital tools
32. **Which factor drives the adoption of digital tools in businesses?** []
- a) Employee resistance
 - b) Increasing need for efficiency and competitiveness
 - c) Reducing the cost of paper
 - d) Decreasing the use of technology
33. **What is the purpose of Gantt charts in project management software?** []
- a) Sending messages to team members
 - b) Visualizing project schedules and timelines
 - c) Automating task delegation
 - d) Creating marketing campaigns
34. **Which project management tool offers kanban boards for task Organization?** []
- a) Tableau
 - b) Trello
 - c) Slack
 - d) Google Analytics
35. **What is a key feature of Microsoft Teams?** []
- a) E-commerce integration
 - b) File sharing and group chats
 - c) Advanced data analysis
 - d) Inventory tracking
36. **What is the primary advantage of Slack over traditional email?** []
- a) More storage space
 - b) Faster and organized team communication
 - c) Limited functionality
 - d) No notifications
37. **Which of these is NOT a feature of Tableau?** []
- a) Creating visual dashboards
 - b) Interactive data visualization
 - c) Automating team communication
 - d) Analyzing large datasets


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38. **What is the role of Google Analytics in business?** []
a) Managing projects
b) Tracking website traffic and user behavior
c) Managing social media posts
d) Creating team workflows
39. **Which tool helps schedule and monitor social media posts?** []
a) Hootsuite
b) Salesforce
c) Google Analytics
d) Zoom
40. **What feature of HubSpot is especially valuable for marketers?** []
a) CRM integration for lead tracking
b) Payment processing
c) E-commerce functionality
d) Project scheduling
41. **What is a key feature of Salesforce?** []
a) Video conferencing
b) Comprehensive customer data tracking
c) Automated cybersecurity
d) Social media marketing
42. **How can CRM tools support sales teams?** []
a) By providing automated project timelines
b) By tracking customer interactions and streamlining sales processes
c) By offering e-commerce payment solutions
d) By replacing all manual tasks
43. **What is a common cyber threat businesses face?** []
a) Strong password requirements
b) Phishing attacks
c) Using collaboration tools
d) Employing firewalls
44. **Why is multi-factor authentication recommended?** []
a) It simplifies the login process
b) It eliminates the risk of hacking
c) It reduces the need for passwords
d) It provides an extra layer of security for accounts
45. **Which feature is critical for e-commerce platforms?** []
a) Social media integration
b) Secure payment gateways
c) Project tracking
d) Collaboration tools


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46. What role does WooCommerce play in online business? []
- a) Analyzing customer data
 - b) Running marketing campaigns
 - c) Managing team communication
 - d) Powering e-commerce functionalities within WordPress
47. What is a primary advantage of AI in business? []
- a) Removing employees from decision-making processes
 - b) Automating complex tasks and providing insights
 - c) Simplifying manual marketing
 - d) Reducing data accuracy
48. How is IoT used in inventory management? []
- a) By tracking product movement in real-time using connected devices
 - b) By automating payment systems
 - c) By visualizing sales trends
 - d) By streamlining communication
49. What is a key factor in successfully adopting new digital tools? []
- a) Ignoring user feedback
 - b) Providing training and support for users
 - c) Avoiding change management
 - d) Implementing tools without testing
50. How can you gain stakeholder buy-in for digital tool implementation? []
- a) Clearly presenting the benefits and addressing potential concerns
 - b) Excluding them from the planning process
 - c) Limiting communication about the plan
 - d) Implementing tools without consulting others



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1.2.1. Certificate/Value Added Courses

Question Paper

18.Certificate Program on Financial Modeling


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB103	Certificate Program on Financial Modeling		Max Marks:50	Time: 1 Hr

Date : 03.02.2023

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What are the three main components of financial models?** []
 - a. Inputs, calculations, outputs
 - b. Assets, liabilities, equity
 - c. Income, expenses, cash flow
 - d. Tools, formulas, reports
2. **Which software is commonly used for financial modeling?** []
 - a. Photoshop
 - b. Excel
 - c. Word
 - d. PowerPoint
3. **What is the primary purpose of financial modeling?** []
 - a. Designing marketing strategies
 - b. Predicting financial outcomes
 - c. Developing software systems
 - d. Creating organizational policies
4. **Which financial statement shows a company's profitability over a period?** []
 - a. Balance Sheet
 - b. Income Statement
 - c. Cash Flow Statement
 - d. Equity Statement
5. **How are the Income Statement and Balance Sheet connected?** []
 - a. Through retained earnings
 - b. Through expenses
 - c. Through cash inflows
 - d. Through revenue growth
6. **What is critical to ensure accuracy in financial statements?** []
 - a. Using only external data
 - b. Consistency in linking formulas
 - c. Ignoring historical data
 - d. Frequent changes to assumptions


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7. **What is a common method for projecting revenue?** []
 a. Using arbitrary percentages
 b. Analyzing historical trends and market data
 c. Ignoring previous performance
 d. Only using current cash flow data
8. **What should be incorporated into financial forecasts?** []
 a. External assumptions only
 b. Internal assumptions and external data
 c. Arbitrary predictions
 d. Only financial ratios
9. **Which cost is considered variable?** []
 a. Rent
 b. Raw materials
 c. Salaries
 d. Loan repayments
10. **Which valuation method involves future cash flows?** []
 a. Comparable Company Analysis
 b. Precedent Transactions
 c. Discounted Cash Flow (DCF)
 d. Net Present Value (NPV)
11. **What does Comparable Company Analysis use for valuation?** []
 a. Market multiples
 b. Future projections
 c. Present value of dividends
 d. Historical revenues
12. **Which data is analyzed in Precedent Transactions?** []
 a. Future growth estimates
 b. Historical transaction data
 c. Competitor market share
 d. Risk tolerance
13. **What does scenario analysis evaluate?** []
 a. Current financial stability
 b. Different business conditions
 c. Competitor performance
 d. Historical performance only
14. **Which Excel tool is commonly used for sensitivity analysis?** []
 a. Solver
 b. Data Tables
 c. Pivot Charts
 d. VBA Macros
15. **What is the focus of sensitivity analysis?** []
 a. Impact of changing assumptions
 b. Future market trends
 c. Previous financial statements
 d. Fixed cost changes only
16. **What type of risk involves fluctuating exchange rates?** []
 a. Credit risk
 b. Market risk
 c. Operational risk
 d. Liquidity risk
17. **Which method is used for stress testing?** []
 a. Adjusting formulas in Excel
 b. Simulating extreme scenarios
 c. Comparing past trends
 d. Analyzing industry benchmarks

18. **Monte Carlo simulations are used to:** []
 a. Generate deterministic results
 b. Model uncertainty in financial projections
 c. Avoid forecasting risks
 d. Simplify calculations
19. **Which function combines data from different sheets?** []
 a. OFFSET
 b. VLOOKUP
 c. INDEX-MATCH
 d. CONCATENATE
20. **What is the purpose of data validation?** []
 a. To restrict input values
 b. To highlight data
 c. To create dynamic graphs
 d. To summarize tables
21. **What enhances interactivity in financial models?** []
 a. VBA scripting
 b. Conditional formatting
 c. Data validation and dynamic ranges
 d. Pivot Charts
22. **Why is documenting assumptions important?** []
 a. To make the model more complex
 b. For transparency and reproducibility
 c. To limit user inputs
 d. To increase confidentiality
23. **What should a well-structured model prioritize?** []
 a. Aesthetic appeal
 b. Clarity and efficiency
 c. Maximum number of tabs
 d. External references
24. **What is a key best practice in financial modeling?** []
 a. Using minimal comments
 b. Linking cells clearly and consistently
 c. Avoiding cell references
 d. Relying on assumptions without sources
25. **What do real-world case studies in financial modeling help with?** []
 a. Simplifying theories
 b. Applying concepts to practice
 c. Avoiding group work
 d. Standardizing all models
26. **Which industries often use financial modeling?** []
 a. Finance, retail, and technology
 b. Education, healthcare, and arts
 c. Construction, government, and sports
 d. Tourism, agriculture, and hospitality
27. **Why is reviewing past models useful?** []
 a. To repeat mistakes
 b. To analyze lessons learned
 c. To reduce documentation efforts
 d. To avoid new ideas
28. **What is a future trend in financial modeling?** []
 a. Manual calculations
 b. AI and machine learning integration
 c. Avoiding advanced technologies
 d. Reducing automation

29. **What does ERP integration help with?** []
a. Isolating financial models
b. Synchronizing financial systems
c. Limiting data accessibility
d. Ignoring historical trends
30. **Which advanced topic deals with derivative pricing?** []
a. DCF analysis
b. Monte Carlo simulations
c. Corporate financial strategy
d. Risk assessment techniques
31. **What is the first step in building a financial model?** []
a. Designing outputs
b. Inputting random data
c. Identifying objectives and assumptions
d. Choosing the software
32. **Why is Excel widely used for financial modeling?** []
a. It is free to use
b. It has advanced visualization tools
c. It supports powerful functions and customization
d. It automatically generates financial statements
33. **Which financial statement provides a snapshot of a company's financial position?** []
a. Income Statement
b. Balance Sheet
c. Cash Flow Statement
d. Statement of Retained Earnings
34. **What does the Cash Flow Statement primarily track?** []
a. Revenue growth
b. Profitability ratios
c. Sources and uses of cash
d. Market trends
35. **Which line item links all three financial statements?** []
a. Total Revenue
b. Net Income
c. Operating Expenses
d. Depreciation
36. **What is a fixed cost example?** []
a. Utility bills
b. Rent
c. Raw material costs
d. Commission fees
37. **How can assumptions in forecasts be validated?** []
a. By comparing with industry benchmarks
b. By ignoring historical data
c. By using arbitrary multipliers
d. By relying solely on internal data
38. **Which technique helps refine revenue forecasting?** []
a. Randomized modeling
b. Sensitivity analysis
c. Scenario building based on trends
d. Using fixed formulas

39. **What is the discount rate in DCF analysis often based on?** []
 a. Future revenue growth
 b. Weighted Average Cost of Capital (WACC)
 c. Gross profit margin
 d. Current liabilities
40. **Which valuation technique uses a company's peers as a benchmark?** []
 a. DCF Analysis
 b. Comparable Company Analysis
 c. Stress Testing
 d. Risk Adjustment
41. **What is the primary output of DCF analysis?** []
 a. Equity value
 b. Asset turnover ratio
 c. Market share
 d. Historical revenue growth
42. **What does sensitivity analysis highlight?** []
 a. Impact of varying key drivers
 b. Historical performance only
 c. The best-case scenario
 d. Industry-wide trends
43. **What is an advantage of using Excel's Scenario Manager?** []
 a. Automates cash flow projections
 b. Evaluates multiple input sets easily
 c. Predicts future profits
 d. Eliminates manual data input
44. **Which type of scenario typically assumes the worst-case business outcome?** []
 a. Base case
 b. Optimistic case
 c. Pessimistic case
 d. Break-even case
45. **What is credit risk?** []
 a. Risk of currency fluctuations
 b. Risk of customer payment defaults
 c. Risk of internal operational errors
 d. Risk of stock price declines
46. **Which method evaluates the impact of extreme market conditions?** []
 a. Stress testing
 b. Historical analysis
 c. Forecasting
 d. Comparable company valuation
47. **What is a key benefit of Monte Carlo simulations?** []
 a. Reducing model complexity
 b. Generating probabilistic outcomes
 c. Automating income statements
 d. Improving operational efficiency
48. **Which function is best for referencing data in a two-dimensional table?** []
 a. VLOOKUP
 b. HLOOKUP
 c. INDEX-MATCH
 d. OFFSET

49. **How can financial models be made more user-friendly?**

[]

- a. Hiding all formulas
- b. Adding labels and documentation
- c. Avoiding conditional formatting
- d. Using complex VBA macros exclusively

50. **What is one key feature of an efficient model structure?**

[]

- a. Minimal transparency
- b. Clearly defined inputs, calculations, and outputs
- c. Multiple sources for every formula
- d. Using hardcoded data throughout




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1.2.1. Certificate/Value Added Courses

Question Paper

19. Bridge Course on Fundamentals of Programming

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	BMC101	Bridge course on Fundamentals of Programming		Max Marks:50	Time: 1 Hr

Date :03.02.2023

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

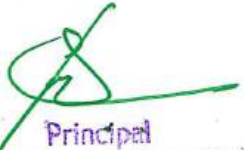
1. **Which of the following is a high-level programming language?** []
 - a) Assembly
 - b) Machine Code
 - c) Binary
 - d) Python

2. **What does syntax in programming refer to?** []
 - a) The order of hardware components
 - b) The design of an operating system
 - c) The set of rules defining how programs are written
 - d) The performance of the program

3. **Which step is essential before writing code?** []
 - a) Buying hardware
 - b) Setting up a programming environment
 - c) Learning to use spreadsheets
 - d) Learning advanced algorithms


4. **Which of these is a primitive data type?** []
 - a) Object
 - b) Dictionary
 - c) Array
 - d) Integer

5. **What is the purpose of type casting?** []
 - a) To convert one data type into another
 - b) To protect data in memory
 - c) To debug code efficiently
 - d) To write comments in the program


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6. **What symbol is used to declare a constant in most programming languages?** []
a) @
b) \$
c) const
d) var
7. **Which of the following is an arithmetic operator?** []
a) ==
b) &&
c) +
d) ||
8. **What is the result of the expression $5 + 2 * 3$ in most programming languages?** []
a) 11
b) 21
c) 15
d) 7
9. **Logical operators are used for:** []
a) Combining multiple conditions
b) Calculating numeric values
c) Converting data types
d) Debugging programs
10. **Which keyword is used for a conditional statement?** []
a) case
b) loop
c) repeat
d) if
11. **What is the purpose of a for loop?** []
a) To execute a block once
b) To repeat a block a fixed number of times
c) To terminate a program
d) To handle exceptions
12. **What is an example of a nested control structure?** []
a) A loop inside a variable
b) Declaring functions inside a loop
c) An if statement inside a loop
d) Using relational operators
13. **What does a function return by default if no return value is specified?** []
a) 0
b) -1
c) null
d) void

14. **What is the scope of a variable declared inside a function?** []
- a) Global
 - b) Local
 - c) Static
 - d) Dynamic
15. **Which keyword is used to define a function?** []
- a) let
 - b) loop
 - c) def
 - d) var
16. **An array is:** []
- a) A collection of elements stored at contiguous memory locations
 - b) A single variable
 - c) An unorganized collection of data
 - d) A file system
17. **What is a characteristic of a multi-dimensional array?** []
- a) It contains only strings
 - b) It is faster than single-dimensional arrays
 - c) It uses rows and columns
 - d) It must have exactly two dimensions
18. **Which of the following is not a data structure?** []
- a) String
 - b) List
 - c) Array
 - d) Condition
19. **What is a runtime error?** []
- a) An error in the operating system
 - b) An error that occurs while the program is executing
 - c) An error in variable declaration
 - d) An error before compilation
20. **What is the purpose of a debugger?** []
- a) Writing new code
 - b) Generating reports
 - c) Enhancing application design
 - d) Identifying and fixing errors
21. **Which statement is used to handle exceptions?** []
- a) try-catch
 - b) try-except
 - c) debug-continue
 - d) loop-handle

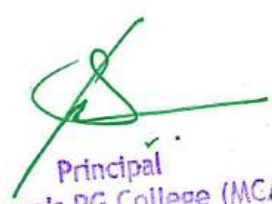

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22. What is the key feature of an algorithm? []
- a) Complex design
 - b) Random execution
 - c) A clear set of instructions
 - d) Unlimited steps
23. Which sorting algorithm is based on repeatedly swapping adjacent elements? []
- a) Merge Sort
 - b) Bubble Sort
 - c) Quick Sort
 - d) Binary Sort
24. What is the time complexity of a linear search? []
- a) $O(1)$
 - b) $O(n^2)$
 - c) $O(\log n)$
 - d) $O(n)$
25. What is the primary purpose of project work in programming? []
- a) To apply learned concepts
 - b) To improve operating systems
 - c) To learn new programming languages
 - d) To copy existing solutions
26. How should a project presentation ideally end? []
- a) With code debugging
 - b) With unanswered questions
 - c) With a discussion of solutions
 - d) By rewriting code
27. Integrating programming constructs refers to: []
- a) Combining loops, functions, and structures
 - b) Developing hardware
 - c) Writing standalone instructions
 - d) Avoiding debugging
28. Reviewing concepts is important for: []
- a) Learning new programming languages
 - b) Debugging errors
 - c) Ensuring foundational understanding
 - d) Avoiding algorithm implementation
29. What is an example of an advanced topic? []
- a) Conditional statements
 - b) Machine Learning
 - c) Arithmetic operators
 - d) Debugging tools

30. **Where can a programmer find resources for further learning?** []
- a) Only in textbooks
 - b) From outdated libraries
 - c) Online courses and documentation
 - d) From hardware specifications
31. **Which is not a programming paradigm?** []
- a) Object-oriented
 - b) Procedural
 - c) Functional
 - d) Algorithmic
32. **What is an IDE in programming?** []
- a) Integrated Development Environment
 - b) Internal Debugging Extension
 - c) Interactive Data Executor
 - d) Input Design Editor
33. **A variable that cannot change during the execution of a program is:** []
- a) Static
 - b) Constant
 - c) Global
 - d) Dynamic
34. **What will the following code output? `print(type(3.14))` (in Python)** []
- a) `<class 'int'>`
 - b) `<class 'str'>`
 - c) `<class 'float'>`
 - d) `<class 'bool'>`
35. **Which of the following has the highest precedence in most programming languages?** []
- a) Logical operators
 - b) Relational operators
 - c) Arithmetic operators
 - d) Assignment operators
36. **What is the output of `8 % 3`?** []
- a) 2
 - b) 3
 - c) 1
 - d) 8
37. **The while loop is best used when:** []
- a) Iterations are fixed
 - b) The condition always evaluates to false
 - c) Iterations depend on a condition
 - d) Code should not be executed

38. Which of these statements is valid in most programming languages? []
- a) if (x = 10)
 - b) if (x == 10)
 - c) if x := 10
 - d) if [x = 10]
39. A recursive function is one that: []
- a) Calls another function
 - b) Contains a loop
 - c) Calls itself
 - d) Returns multiple values
40. Which of the following is an invalid function name? []
- a) 2ndFunction
 - b) helper Function
 - c) calculate Sum
 - d) main function
41. Which of the following correctly initializes an array in C++? []
- a) int array = {1, 2, 3};
 - b) int array[] = {1, 2, 3};
 - c) int array[3] = {1, 2, 3};
 - d) array int[3] = {1, 2, 3};
42. How is a string typically represented in C? []
- a) A single character variable
 - b) A pointer
 - c) An integer array
 - d) A character array
43. Which type of error is detected during program execution? []
- a) Syntax error
 - b) Runtime error
 - c) Compilation error
 - d) Logical error
44. What is the purpose of a breakpoint in debugging? []
- a) To pause execution at a specific point
 - b) To improve the program speed
 - c) To terminate the program
 - d) To remove errors automatically
45. Which algorithm is based on divide-and-conquer? []
- a) Bubble Sort
 - b) Linear Search
 - c) Merge Sort
 - d) Selection Sort

46. Which searching algorithm is efficient for sorted arrays? []
- a) Binary Search
 - b) Linear Search
 - c) Quick Search
 - d) Hash Search
47. When dividing tasks in a project, it is best to: []
- a) Work only on complex features first
 - b) Work without a plan
 - c) Break the project into manageable modules
 - d) Test only after completing the project
48. The key outcome of a programming project is: []
- a) A working program that meets requirements
 - b) Code written without comments
 - c) Using the latest tools
 - d) Completing it faster than planned
49. Which resource is best for advanced programming concepts? []
- a) Beginner tutorials
 - b) Official documentation and research papers
 - c) Random blog posts
 - d) Social media
50. Learning advanced topics like AI and machine learning requires a strong understanding of: []
- a) Debugging only
 - b) Random programming languages
 - c) Basic hardware components
 - d) Basic programming concepts and algorithms



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1.2.1. Certificate/Value Added Courses

Question Paper

20. Certificate Program on Google Cloud

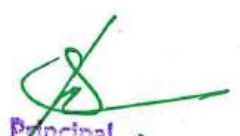
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC103	Certificate Program on Google Cloud		Max Marks:50	Time: 1 Hr

Date : 10.02.2023


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:


1. Which tool provides a web-based interface to interact with Google Cloud? []
a) Google SDK
b) Google Cloud CLI
c) Google Cloud Console
d) Google Compute Engine
2. What is the primary function of the Google Cloud CLI? []
a) Manage virtual machines
b) Interact with Google Cloud services via command-line
c) Visualize billing data
d) Create AI models
3. Which of the following is not a core component of Google Cloud Platform? []
a) Compute services
b) Data analytics
c) Physical server maintenance
d) Networking
4. What is the primary function of Google Compute Engine? []
a) Manage containerized applications
b) Create and manage virtual machines
c) Stream data for analytics
d) Deploy NoSQL databases
5. Google Kubernetes Engine (GKE) is used to manage which of the following? []
a) Virtual machines
b) Containerized applications
c) Object storage
d) IAM roles
6. Which computer service is a PaaS offering from Google Cloud? []
a) Google Compute Engine
b) Google App Engine
c) Google Kubernetes Engine
d) Cloud Run


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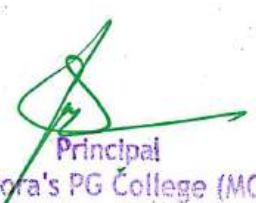
7. Which service provides object storage in Google Cloud? []
a) Bigtable
b) Cloud SQL
c) Google Cloud Storage
d) Datastore
8. Which database service is designed for globally distributed, strongly consistent relational databases? []
a) Cloud SQL
b) Cloud Spanner
c) BigQuery
d) Datastore
9. Which NoSQL database is optimized for wide-column storage? []
a) Bigtable
b) Datastore
c) Cloud SQL
d) Pub/Sub
10. What does VPC stand for in Google Cloud? []
a) Virtual Private Cloud
b) Virtual Protocol Container
c) Virtual Process Configuration
d) Virtualized Platform Cluster
11. What is the purpose of Identity and Access Management (IAM)? []
a) Encrypt data in storage
b) Assign roles and manage permissions
c) Monitor network traffic
d) Deploy virtual machines
12. Which practice is essential for securing your Google Cloud environment? []
a) Disabling VPCs
b) Using strong IAM policies
c) Avoiding monitoring tools
d) Running unpatched systems
13. What is the primary use of BigQuery? []
a) NoSQL database
b) Data warehousing and analysis
c) Virtual machine management
d) Stream processing
14. Which service supports both stream and batch data processing? []
a) Bigtable
b) Dataflow
c) Datastore
d) Pub/Sub
15. Which service is used to implement event-driven architecture? []
a) BigQuery
b) Dataflow
c) Pub/Sub
d) Cloud SQL


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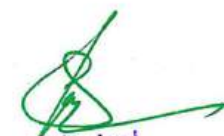
16. Which service allows you to train machine learning models on Google Cloud? []
a) AutoML
b) App Engine
c) Cloud SQL
d) Cloud Functions
17. What is TensorFlow used for in Google Cloud? []
a) Data storage
b) Container management
c) Building and deploying machine learning models
d) Creating IAM policies
18. Which platform is used for training and deploying AI models? []
a) AI Platform
b) BigQuery
c) VPC
d) Cloud Storage
19. What is the main purpose of Google Cloud Functions? []
a) Deploying relational databases
b) Running event-driven serverless functions
c) Managing virtual machines
d) Hosting large files
20. Which service is used to deploy containers in a serverless environment? []
a) App Engine
b) Cloud Run
c) Kubernetes Engine
d) Cloud Functions
21. Which compute service supports automatic scaling for applications? []
a) App Engine
b) Cloud Functions
c) Compute Engine
d) Cloud Storage
22. What is the primary purpose of Cloud Monitoring? []
a) Managing IAM policies
b) Monitoring and logging resource performance
c) Hosting web applications
d) Storing analytics data
23. Which tool is used for alerting in Google Cloud? []
a) Cloud Storage
b) Cloud Logging
c) Cloud Monitoring
d) BigQuery
24. Resource optimization involves which of the following? []
a) Increasing VM sizes unnecessarily
b) Using the right size and type of resources
c) Disabling cost monitoring tools
d) Over provisioning storage
25. Which feature helps you set spending limits in Google Cloud? []
a) IAM policies
b) Cloud Billing Budgets
c) Cloud Functions
d) BigQuery quotas


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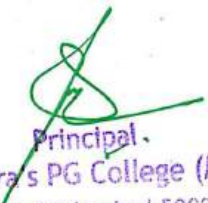
26. **What is a best practice for cost management?** []
 a) Disabling alerts
 b) Reviewing unused resources regularly
 c) Allocating maximum resource limits
 d) Avoiding auto-scaling features
27. **Which tool can provide cost analysis for resource usage?** []
 a) Cloud Storage
 b) BigQuery
 c) Cost Management Dashboard
 d) Cloud Spanner
28. **What is the first step in preparing for Google Cloud certification?** []
 a) Skipping practice exams
 b) Reviewing key services and concepts
 c) Ignoring study guides
 d) Only memorizing CLI commands
29. **Which type of exam question should you practice the most for Google Cloud certification?** []
 a) Essay
 b) Multiple-choice questions
 c) Open-book questions
 d) True/False questions
30. **Why is understanding real-world scenarios important for certification exams?** []
 a) Exams are entirely theoretical
 b) Exams test practical knowledge of Google Cloud services
 c) Exams do not cover scenarios
 d) Real-world scenarios are optional to study
31. **Which Google Cloud service allows you to provision virtual machines with custom configurations?** []
 a) App Engine
 b) Compute Engine
 c) Cloud Functions
 d) Kubernetes Engine
32. **Which of the following is true about Google Cloud?** []
 a) Google Cloud is limited to data storage only.
 b) Google Cloud is primarily used for artificial intelligence and machine learning.
 c) Google Cloud provides a variety of services, including computing, storage, and networking.
 d) Google Cloud only supports open-source applications.
33. **Which of the following does Google Kubernetes Engine (GKE) use for managing containers?** []
 a) Virtual machines
 b) Pods
 c) Functions
 d) Databases
34. **Google App Engine offers which of the following features?** []
 a) Virtual machine management
 b) A fully managed platform for application deployment
 c) Container orchestration
 d) NoSQL database


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35. Which of the following Google Cloud storage services is ideal for structured relational data? []
a) Cloud Storage
b) Cloud SQL
c) BigQuery
d) Cloud Datastore
36. Which Google Cloud service is recommended for real-time analytics on large datasets? []
a) BigQuery
b) Datastore
c) Cloud Storage
d) Cloud SQL
37. What type of network is created using Google Cloud's VPC? []
a) Public network
b) Private and isolated network
c) Hybrid cloud network
d) Global CDN network
38. What is a key security practice in Google Cloud related to managing user access? []
a) Use a single global administrator account
b) Assign minimal IAM roles with the principle of least privilege
c) Avoid using multi-factor authentication
d) Use public IP addresses for sensitive data storage
39. Which Google Cloud service is primarily used for large-scale real-time data processing? []
a) Cloud SQL
b) Dataflow
c) BigQuery
d) Cloud Datastore
40. What is Pub/Sub primarily used for? []
a) Data warehousing
b) Real-time analytics
c) Event-driven messaging and data streaming
d) NoSQL database management
41. Which Google Cloud service automates the process of training and tuning machine learning models? []
a) Cloud AutoML
b) TensorFlow
c) Cloud Functions
d) AI Platform
42. Which Google Cloud service can be used to integrate machine learning models into production applications? []
a) Cloud Run
b) TensorFlow
c) AI Platform
d) Kubernetes Engine


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43. Which Google Cloud service allows you to run stateless containers without managing servers? []
a) Cloud Run
b) App Engine
c) Compute Engine
d) Kubernetes Engine
44. Which is the primary benefit of serverless computing on Google Cloud? []
a) No need to manage infrastructure
b) Lower storage costs
c) Pre-configured virtual machines
d) Real-time monitoring of cloud instances
45. Which Google Cloud service provides centralized logging? []
a) Cloud Monitoring
b) Cloud Logging
c) Cloud Storage
d) Cloud Functions
46. What is a key feature of Google Cloud's incident management? []
a) Real-time billing alerts
b) Automated resolution of all issues
c) Proactive monitoring and alerting
d) Manual tracking of incidents only
47. Which tool helps users forecast and analyze cloud costs in Google Cloud? []
a) Cloud Storage
b) Cloud Billing Reports
c) BigQuery
d) Google Cloud SDK
48. Which of the following is a recommended strategy to optimize Cloud resource usage? []
a) Always overprovision resources
b) Use auto-scaling based on actual demand
c) Disable all cost management features
d) Ignore unused resources
49. Which of the following should be avoided when preparing for Google Cloud certification exams? []
a) Reviewing real-world case studies
b) Skipping practice exams
c) Studying exam guides
d) Understanding cloud service limitations
50. Which study resource is most effective for Google Cloud certification preparation? []
a) Only reading Google Cloud documentation
b) Practice exams and hands-on labs
c) Watching webinars only
d) Memorizing Google Cloud services



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1.2.1. Certificate/Value Added Courses

Question Paper

21. Training Program on Data Analytics

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	TMB202	Training Program on Data Analytics		Max Marks:50	Time: 1 Hr

Date : 26.04.2024

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What is the primary purpose of data analytics?** []
a) Storing data
b) Cleaning data
c) Deriving insights from data
d) Predicting future trends
2. **Which of the following is a type of data?** []
a) Structured
b) Unstructured
c) Semi-structured
d) All of the above
3. **What does the data life cycle NOT include?** []
a) Collection
b) Guesswork
c) Analysis
d) Archiving
4. **Which tool is commonly used for data visualization?** []
a) SQL
b) Python
c) Tableau
d) Hadoop
5. **What is a key feature of descriptive analytics?** []
a) Predicts future outcomes
b) Optimizes processes
c) Summarizes historical data
d) Creates machine learning models
6. **What is the first step in data collection?** []
a) Cleaning the data
b) Identifying data sources
c) Creating visualizations
d) Performing analysis

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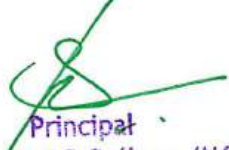
7. **What does data cleaning involve?** []
a) Removing or handling inconsistencies
b) Building models
c) Designing dashboards
d) Creating features
8. **Which technique is used to handle missing values?** []
a) Regression analysis
b) Clustering
c) Imputation
d) Overfitting
9. **What is feature engineering?** []
a) Creating new variables from existing data
b) Cleaning data
c) Removing duplicates
d) Testing hypotheses
10. **Which process converts data into a common scale?** []
a) Aggregation
b) Normalization
c) Transformation
d) Encoding
11. **What is a measure of central tendency?** []
a) Range
b) Mean
c) Variance
d) Standard deviation
12. **What is used to visualize data distributions?** []
a) Scatter plots
b) Histograms
c) Box plots
d) All of the above
13. **What does EDA stand for?** []
a) Exploratory Data Analysis
b) Extensive Data Assessment
c) Easy Data Analytics
d) Enterprise Data Application
14. **Which of the following identifies outliers?** []
a) Box plots
b) Line graphs
c) Bar charts
d) Pie charts
15. **What is the purpose of EDA?** []
a) Create predictive models
b) Explore and summarize data
c) Develop dashboards
d) Conduct hypothesis testing
16. **What is an essential principle of data visualization?** []
a) Complexity
b) Irregularity
c) Clarity
d) Overloading visuals

17. Which tool is NOT used for creating data visualizations? []
a) Power BI
b) MySQL
c) Excel
d) Tableau
18. What does an interactive dashboard allow users to do? []
a) Clean data
b) Explore data through filters and actions
c) Perform hypothesis testing
d) Predict future outcomes
19. What is the benefit of using scatter plots? []
a) Displaying categorical data
b) Identifying relationships between two variables
c) Aggregating data
d) Visualizing time series
20. What is a common error in data visualization? []
a) Misleading scales
b) Using consistent labels
c) Showing clear legends
d) Highlighting key trends
21. What does hypothesis testing help determine? []
a) If there is evidence to support a claim
b) The average of a dataset
c) Data visualization principles
d) Cleaning processes
22. Which test is used for comparing means between two groups? []
a) Chi-square test
b) t-test
c) ANOVA
d) Regression
23. What is the null hypothesis? []
a) A hypothesis you want to prove
b) A default assumption of no effect
c) The result of hypothesis testing
d) A statistical model
24. When is a chi-square test used? []
a) For categorical data
b) For numerical data
c) For time series
d) For regression analysis
25. What is the p-value? []
a) The size of a sample
b) The probability of observing results under the null hypothesis
c) The range of the data
d) The mean of the data
26. What is regression analysis used for? []
a) Clustering data
b) Cleaning data
c) Understanding relationships between variables
d) Testing hypotheses

27. **Which is a type of regression?** []
a) Linear regression
b) Logistic regression
c) Both a and b
d) None of the above
28. **What is multicollinearity?** []
a) When a model is too simple
b) When independent variables are highly correlated
c) When there are missing values
d) When data is normalized
29. **What does R-squared measure?** []
a) Model complexity
b) Proportion of variance explained by the model
c) Number of predictors in the model
d) Statistical significance
30. **What is a key assumption of linear regression?** []
a) Linearity between variables
b) Non-parametric data
c) Random data collection
d) No missing values
31. **What is the main goal of predictive analytics?** []
a) Forecast future outcomes
b) Summarize past data
c) Create dashboards
d) Explore data distributions
32. **Which algorithm is used for classification?** []
a) k-means
b) Linear regression
c) Decision trees
d) PCA
33. **What type of learning uses labeled data?** []
a) Supervised learning
b) Unsupervised learning
c) Reinforcement learning
d) Feature learning
34. **What does k-nearest neighbors (k-NN) classify based on?** []
a) Decision boundaries
b) Distance to neighboring data points
c) Statistical tests
d) Tree structures
35. **Which algorithm works by creating hyperplanes?** []
a) Decision trees
b) k-NN
c) Support Vector Machines (SVM)
d) PCA
36. **What is clustering?** []
a) Predicting values
b) Visualizing data
c) Grouping similar data points
d) Cleaning data

37. Which algorithm is NOT used for clustering? []
a) k-means
b) Hierarchical clustering
c) Linear regression
d) DBSCAN
38. What is the purpose of PCA? []
a) Regression modeling
b) Classification tasks
c) Reducing dimensionality of data
d) Predictive analytics
39. Which metric evaluates clustering performance? []
a) R-squared
b) Silhouette score
c) p-value
d) Mean squared error
40. What type of learning is clustering associated with? []
a) Supervised learning
b) Unsupervised learning
c) Reinforcement learning
d) Predictive modeling
41. What is time series analysis used for? []
a) Forecasting future trends
b) Classifying images
c) Detecting clusters
d) Creating dashboards
42. What does NLP stand for? []
a) Network Layer Processing
b) Natural Language Processing
c) Neural Learning Paradigm
d) Node-Level Prediction
43. Which is a characteristic of big data? []
a) Volume
b) Velocity
c) Variety
d) All of the above
44. Which tool is commonly used for distributed computing? []
a) Apache Hadoop
b) Tableau
c) Excel
d) SQL
45. What is sentiment analysis? []
a) Cleaning data
b) Analyzing emotions in text data
c) Visualizing trends
d) Forecasting sales
46. What is a key component of case studies? []
a) Model selection
b) Data visualization
c) Real-world application of analytics
d) Performing clustering

47. **What does stakeholder presentation involve?** []
a) Cleaning data
b) Predictive modeling
c) Communicating insights clearly
d) Building algorithms
48. **What is a group project typically designed to teach?** []
a) Advanced coding skills
b) Collaborative problem-solving
c) Data storage techniques
d) Statistical tests
49. **Which industry is NOT commonly associated with data analytics?** []
a) Healthcare
b) Agriculture
c) Retail
d) Finance
50. **What is the final step in a data analytics project?** []
a) Data collection
b) Data cleaning
c) Presenting findings
d) Statistical testing



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1.2.1. Certificate/Value Added Courses

Question Paper

22. Certificate Program on Business Analytics and DataScience


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB205	Certificate Program on Business Analytics and DataScience		Max Marks:50	Time: 1 Hr

Date :10.03.2023

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

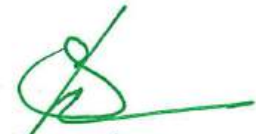
**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

1. **What is the primary purpose of business analytics?** []
 - a) To automate business processes
 - b) To derive insights from data
 - c) To reduce company expenses
 - d) To enhance employee productivity
2. **Which of the following roles is typically responsible for interpreting data and providing actionable insights?** []
 - a) Data Scientist
 - b) Database Administrator
 - c) Network Engineer
 - d) Software Developer
3. **Which of the following is NOT a common tool used in business analytics?** []
 - a) Tableau
 - b) Python
 - c) Adobe Photoshop
 - d) R
4. **What is the first step in the data collection process?** []
 - a) Data analysis
 - b) Defining objectives
 - c) Cleaning data
 - d) Creating visualizations
5. **What is meant by "data quality"?** []
 - a) The amount of data collected
 - b) The accuracy, consistency, and completeness of data
 - c) The cost of data storage
 - d) The format of the data

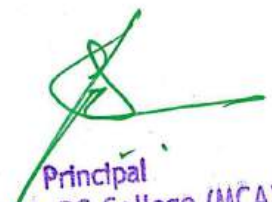

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6. Which of the following is an example of a data storage solution? []
- a) Amazon S3
 - b) Excel Charts
 - c) PowerPoint
 - d) Photoshop
7. What does a histogram show? []
- a) Relationships between variables
 - b) Frequency distribution of data
 - c) Predictions of future trends
 - d) Network performance
8. The mean is a measure of: []
- a) Variability
 - b) Central tendency
 - c) Correlation
 - d) Outliers
9. What does a p-value indicate in inferential statistics? []
- a) Data variability
 - b) Significance of results
 - c) Frequency of data
 - d) Number of outliers
10. What is the primary goal of exploratory data analysis? []
- a) To automate data cleaning
 - b) To uncover patterns and relationships in data
 - c) To build machine learning models
 - d) To store data efficiently
11. Which visualization technique is best for identifying trends over time? []
- a) Histogram
 - b) Line chart
 - c) Scatter plot
 - d) Bar chart
12. What is an outlier? []
- a) A missing data point
 - b) A data point that deviates significantly from the others
 - c) A calculated average
 - d) A visualization tool
13. Which of the following is an example of a supervised learning algorithm? []
- a) K-Means Clustering
 - b) Linear Regression
 - c) PCA (Principal Component Analysis)
 - d) Apriori Algorithm


14. What is the purpose of model validation? []
a) To clean data
b) To improve model storage
c) To assess model performance
d) To visualize data
15. Which metric is commonly used for evaluating classification models? []
a) RMSE
b) Precision
c) Adjusted R-squared
d) Mean
16. Which tool is known for creating interactive dashboards? []
a) Power BI
b) Excel
c) Jupyter Notebook
d) SQL
17. A scatter plot is used to: []
a) Display a distribution of a single variable
b) Show relationships between two variables
c) Highlight outliers in data
d) Summarize data in tables
18. What is the primary purpose of data visualization? []
a) To create artistic designs
b) To visually communicate insights
c) To clean and organize data
d) To reduce file size
19. What defines "big data"? []
a) Data that fits within a single spreadsheet
b) Data too large or complex for traditional processing tools
c) Data that is stored in cloud-based solutions
d) Data that contains numerical values
20. Which of the following is a big data framework? []
a) Hadoop
b) Tableau
c) Excel
d) matplotlib
21. What is a key characteristic of advanced analytics? []
a) Real-time data processing
b) Descriptive reporting
c) Statistical summaries
d) Static visualizations


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- 22. What does "data-driven decision-making" involve?** []
- a) Using intuition for business decisions
 - b) Relying on data insights to guide decisions
 - c) Avoiding data analysis to save time
 - d) Delegating decisions to employees
- 23. Which of the following helps in optimizing business processes?** []
- a) Random guessing
 - b) Data-driven strategies
 - c) Manual calculations
 - d) Ignoring past performance
- 24. What is a key challenge of data-driven decision-making?** []
- a) Lack of tools
 - b) Data silos and quality issues
 - c) Overabundance of data storage solutions
 - d) Insufficient visualization options
- 25. What does GDPR stand for?** []
- a) General Data Processing Regulations
 - b) General Data Protection Regulation
 - c) Global Data Privacy Rule
 - d) General Digital Protection Regulation
- 26. What is a common ethical issue in data analytics?** []
- a) Using open-source tools
 - b) Misrepresenting data insights
 - c) Training machine learning models
 - d) Using high-performance servers
- 27. Which of the following promotes ethical data usage?** []
- a) Collecting unauthorized user data
 - b) Ensuring transparency in data practices
 - c) Ignoring privacy regulations
 - d) Prioritizing speed over accuracy
- 28. What is the goal of a capstone project in data science?** []
- a) To learn programming languages
 - b) To apply theoretical concepts to real-world problems
 - c) To focus on data storage
 - d) To memorize statistical formulas
- 29. Case studies in business analytics are useful for:** []
- a) Exploring theoretical frameworks
 - b) Understanding practical applications of concepts
 - c) Testing software tools
 - d) Formatting reports


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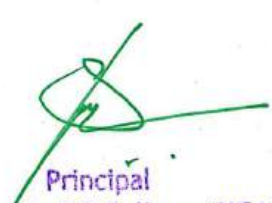
30. What is an essential element of presenting findings? []
- a) Using technical jargon
 - b) Ensuring clarity and actionable recommendations
 - c) Avoiding visual aids
 - d) Including unnecessary details
31. Which of the following is NOT a core component of data science? []
- a) Machine learning
 - b) Data engineering
 - c) Graphic design
 - d) Data visualization
32. Business analytics primarily focuses on: []
- a) Past data to understand trends and performance
 - b) Future predictions without data
 - c) Developing new software tools
 - d) Generating random outcomes
33. A key role in business analytics is: []
- a) Enhancing creative content
 - b) Supporting decision-making through data insights
 - c) Designing customer experiences
 - d) Hardware maintenance
34. Which of the following describes unstructured data? []
- a) Data stored in rows and columns
 - b) Data with a predefined model
 - c) Data like emails, videos, and social media posts
 - d) Data with consistent formatting
35. A data lake is: []
- a) A small database with limited capacity
 - b) A centralized repository for raw, unstructured data
 - c) A tool used for cleaning data
 - d) A method to visualize data
36. Which technique is essential for ensuring data accuracy? []
- a) Data encryption
 - b) Data cleaning
 - c) Data migration
 - d) Data visualization
37. The standard deviation is a measure of: []
- a) Central tendency
 - b) Spread or variability in data
 - c) Skewness
 - d) Data reliability


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38. In a normal distribution, approximately what percentage of data falls within one standard deviation of the mean? []
- a) 50%
 - b) 68%
 - c) 95%
 - d) 99.7%
39. What is a null hypothesis in hypothesis testing? []
- a) A hypothesis that predicts a significant effect
 - b) A hypothesis that assumes no effect or relationship
 - c) A visualization technique
 - d) An alternative assumption
40. Which chart is best suited for visualizing the distribution of categorical data? []
- a) Pie chart
 - b) Scatter plot
 - c) Line graph
 - d) Histogram
41. What does a correlation coefficient close to -1 indicate? []
- a) A strong positive relationship
 - b) A strong negative relationship
 - c) No relationship
 - d) A skewed dataset
42. The box plot is used to: []
- a) Highlight the frequency of data
 - b) Summarize data distribution using medians, quartiles, and outliers
 - c) Compare data trends over time
 - d) Display correlation between variables
43. Which algorithm is best suited for classification problems? []
- a) Linear Regression
 - b) Logistic Regression
 - c) K-Means Clustering
 - d) PCA
44. Overfitting occurs when: []
- a) A model performs well on training data but poorly on unseen data
 - b) A model performs well on all datasets
 - c) A model is too simple
 - d) Data is improperly cleaned
45. Cross-validation is used to: []
- a) Visualize data
 - b) Assess a model's generalization to unseen data
 - c) Clean the dataset
 - d) Generate summary statistics


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46. Which color scheme is ideal for visualizations meant for color-blind individuals? []
- a) Monochrome
 - b) Red and green
 - c) High contrast, color-blind friendly palettes
 - d) Pastel shades
47. What is the advantage of interactive dashboards? []
- a) They automatically clean data
 - b) They allow users to explore data dynamically
 - c) They create animations
 - d) They reduce file size
48. Which visualization is best for comparing parts of a whole? []
- a) Scatter plot
 - b) Bar chart
 - c) Pie chart
 - d) Line graph
49. Which of the following is an example of real-time big data processing? []
- a) Batch processing of monthly sales data
 - b) Fraud detection in credit card transactions
 - c) Historical data analysis for trend prediction
 - d) Manually entering sales records
50. Spark is a tool used for: []
- a) Data cleaning in spreadsheets
 - b) Real-time distributed data processing
 - c) Designing interactive dashboards
 - d) Predictive modeling



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1.2.1. Certificate/Value Added Courses

Question Paper

23. Training Program on Generative AI

College code 1304	Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	TMC203	Training Program on Generative AI	Max Marks:50	Time: 1 Hr

Date :10.03.2023

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**


1. Which of the following is an application of generative AI? []
 - a) Text generation
 - b) Image synthesis
 - c) Music composition
 - d) All of the above

2. What year was the term "Generative Adversarial Network" introduced? []
 - a) 2010
 - b) 2012
 - c) 2014
 - d) 2016


3. Which technology forms the foundation of generative AI? []
 - a) Symbolic AI
 - b) Deep learning
 - c) Rule-based systems
 - d) Genetic algorithms

4. A primary application of generative AI in healthcare is: []
 - a) Diagnosis automation
 - b) Drug discovery
 - c) Wearable device development
 - d) Data encryption


5. Which of the following milestones marked significant progress in generative AI? []
 - a) Development of GANs
 - b) Introduction of Transformer models
 - c) OpenAI's GPT series
 - d) All of the above


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6. **What does backpropagation compute?** []
a) Network structure
b) Weight initialization
c) Gradient of the loss function
d) Activation functions
7. **Which activation function introduces non-linearity in neural networks?** []
a) Linear
b) ReLU
c) Step function
d) None of the above
8. **TensorFlow is an example of a:** []
a) Machine learning library
b) Visualization tool
c) Deep learning framework
d) Programming language
9. **What type of neural network is primarily used for image data?** []
a) Recurrent Neural Network (RNN)
b) Fully Connected Network
c) Convolutional Neural Network (CNN)
d) Transformer
10. **Which optimization algorithm is widely used in deep learning?** []
a) Gradient Descent
b) Stochastic Gradient Descent (SGD)
c) Simulated Annealing
d) K-Means
11. **GANs consist of which two components?** []
a) Encoder and Decoder
b) Generator and Discriminator
c) Transformer and Classifier
d) Predictor and Validator
12. **What is the primary goal of the generator in a GAN?** []
a) Identify real data
b) Minimize training time
c) Create realistic data samples
d) Evaluate loss
13. **Which variant of GAN is known for generating high-resolution images?** []
a) CycleGAN
b) DCGAN
c) StyleGAN
d) Pix2Pix


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14. What challenge is common in training GANs? []
- a) Overfitting
 - b) Mode collapse
 - c) Poor generalization
 - d) Underfitting
15. Which GAN variant is used for translating images between domains? []
- a) CycleGAN
 - b) StyleGAN
 - c) DCGAN
 - d) Variational Autoencoder
16. What key concept enables Transformers to process sequences effectively? []
- a) Pooling
 - b) Recurrence
 - c) Self-attention
 - d) Dropout
17. Which Transformer model is known for language understanding tasks? []
- a) GPT
 - b) T5
 - c) BERT
 - d) RoBERTa
18. What is the primary purpose of the encoder in a Transformer? []
- a) Generate responses
 - b) Translate sequences
 - c) Process and understand input sequences
 - d) Discriminate real data
19. Transformers replaced which type of deep learning model for sequence data? []
- a) CNNs
 - b) RNNs
 - c) GANs
 - d) Autoencoders
20. GPT models are optimized for: []
- a) Classification tasks
 - b) Image generation
 - c) Text generation
 - d) Reinforcement learning
21. Data augmentation primarily aims to: []
- a) Reduce overfitting
 - b) Improve model performance
 - c) Increase dataset diversity
 - d) All of the above


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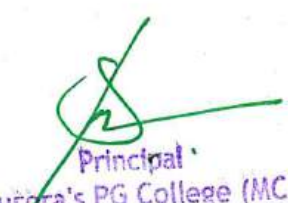
22. Which method is NOT commonly used for image data augmentation? []
- a) Rotation
 - b) Flipping
 - c) Noise addition
 - d) Text tokenization
23. How is a data imbalance issue typically resolved? []
- a) Using dropout
 - b) Resampling the data
 - c) Increasing network size
 - d) Reducing learning rate
24. What type of data preparation is common for text models? []
- a) Tokenization
 - b) Stopword removal
 - c) Lemmatization
 - d) All of the above
25. One-hot encoding is commonly used for: []
- a) Continuous features
 - b) Categorical features
 - c) Image data
 - d) Optimization
26. FID score measures: []
- a) Image diversity only
 - b) Similarity between generated and real images
 - c) Computational efficiency
 - d) Training accuracy
27. Which is NOT a quantitative evaluation metric for generative models? []
- a) Inception Score
 - b) Mean Squared Error
 - c) BLEU
 - d) ROC curve
28. Which technique is commonly used for qualitative evaluation? []
- a) Visualization of outputs
 - b) Statistical analysis
 - c) Cross-validation
 - d) Both a and c
29. Which metric is used to evaluate text generation models? []
- a) RMSE
 - b) BLEU
 - c) FID
 - d) Inception Score


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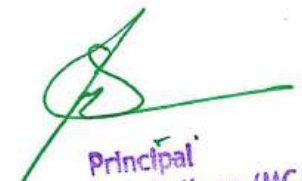
30. What is one way to improve a generative model's results? []
- a) Adding dropout
 - b) Increasing training data
 - c) Decreasing epochs
 - d) Limiting batch size
31. A major ethical concern in generative AI is: []
- a) Limited applications
 - b) Resource inefficiency
 - c) Creating misinformation
 - d) Dataset quality
32. Deep fakes are an example of: []
- a) Style transfer
 - b) Unethical generative AI use
 - c) Data augmentation
 - d) Regularization
33. Generative AI models must prioritize: []
- a) Performance only
 - b) Speed
 - c) Fairness and accountability
 - d) Overfitting
34. Which regulation governs data privacy concerns in AI? []
- a) IEEE guidelines
 - b) GDPR
 - c) ISO standards
 - d) NIST protocols
35. Ethical AI focuses on: []
- a) Model interpretability
 - b) Privacy and security
 - c) Mitigating bias
 - d) All of the above
36. Generative AI is used in the entertainment industry for: []
- a) Video generation
 - b) Scriptwriting
 - c) Music composition
 - d) All of the above
37. In healthcare, generative AI has enabled: []
- a) Advanced diagnostics
 - b) Synthetic data generation
 - c) Medical imaging
 - d) All of the above


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38. A challenge in deploying generative AI is: []
- a) Lack of data
 - b) High computational costs
 - c) Ethical implications
 - d) All of the above
39. Generative AI enhances personalized recommendations by: []
- a) Predicting weather patterns
 - b) Generating user-specific content
 - c) Reducing data noise
 - d) Limiting feedback
40. Which field benefits most from text-to-image models? []
- a) Financial services
 - b) Cybersecurity
 - c) Creative design
 - d) Robotics
41. Few-shot learning allows models to: []
- a) Perform faster computations
 - b) Learn with minimal data
 - c) Generalize across domains
 - d) Both b and c
42. What emerging trend improves Transformer efficiency? []
- a) Gradient clipping
 - b) Sparse attention mechanisms
 - c) Low-rank approximations
 - d) Batch normalization
43. Self-supervised learning relies on: []
- a) Labeled datasets
 - b) Unlabeled data
 - c) Predefined rules
 - d) Expert annotations
44. Advanced generative AI applications include: []
- a) Protein folding
 - b) Autonomous vehicles
 - c) AI-powered journalism
 - d) All of the above
45. What is an anticipated challenge in future generative AI? []
- a) Dataset scarcity
 - b) Ethical dilemmas
 - c) Declining model accuracy
 - d) Reduced computational power


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46. Which industry widely uses generative AI for customer engagement? []
- a) Healthcare
 - b) Retail
 - c) Education
 - d) Agriculture
47. A group project on generative AI could involve: []
- a) Developing GANs for art
 - b) Synthesizing datasets for medical research
 - c) Creating chatbots
 - d) All of the above
48. Case studies highlight the importance of: []
- a) Ethical considerations
 - b) Deployment strategies
 - c) Scalability
 - d) All of the above
49. Generative AI tools like DALL-E are used for: []
- a) Image generation from text
 - b) Time-series forecasting
 - c) Fraud detection
 - d) Speech recognition
50. An example of a problematic generative AI application is: []
- a) Fake news generation
 - b) Biased text generation
 - c) Privacy violations
 - d) All of the above



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1.2.1. Certificate/Value Added Courses

Question Paper

24. Certificate Program on Agile Project Management

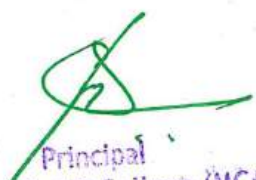
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC206	Certificate Program on Agile Project Management		Max Marks:50	Time: 1 Hr

Date :27.11.2021


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:


1. **What is the primary focus of Agile methodologies?** []
a) Maximizing documentation
b) Delivering software quickly
c) Responding to change and customer needs
d) Delivering value incrementally
2. **Which of the following is NOT one of the Agile Manifesto values?** []
a) Individuals and interactions over processes and tools
b) Comprehensive documentation over working software
c) Following a plan over responding to change
d) Customer collaboration over contract negotiation
3. **Traditional project management is often described as:** []
a) Iterative
b) Incremental
c) Predictive
d) Adaptive
4. **In Scrum, who is responsible for maximizing the value of the product?** []
a) Product Owner
b) Scrum Master
c) Development Team
d) Stakeholders
5. **What is a key principle of Kanban?** []
a) Time-boxed iterations
b) Continuous improvement
c) Fixed roles and responsibilities
d) Visualizing work


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6. **Extreme Programming (XP) emphasizes:** []
a) Frequent releases and customer feedback
b) Pair programming and test-driven development
c) Long development cycles
d) A rigid workflow
7. **Which phase in Agile focuses on understanding the project's goals?** []
a) Concept
b) Inception
c) Iteration
d) Release
8. **Incremental delivery involves:** []
a) Completing the project all at once
b) Delivering small, usable portions of the product
c) Waiting for all requirements to be complete
d) Fixing the scope of the project
9. **What technique is commonly used for planning in Agile?** []
a) Gantt charts
b) Critical Path Method
c) Story points estimation
d) Waterfall charts
10. **Which of the following is NOT a Scrum role?** []
a) Product Owner
b) Project Manager
c) Scrum Master
d) Development Team
11. **What is an artifact in Scrum that lists all the desired work?** []
a) Sprint Backlog
b) Increment
c) Product Backlog
d) Burnup Chart
12. **The Sprint Retrospective focuses on:** []
a) Reviewing completed work
b) Planning the next sprint
c) Improving team processes
d) Discussing technical solutions
13. **What is a key metric measured in Kanban?** []
a) Velocity
b) Cycle time
c) Story points
d) Burndown rate

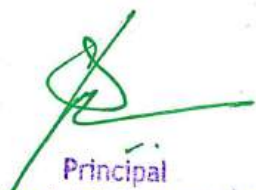

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14. A Kanban board is used to: []
- a) Prioritize work
 - b) Estimate story points
 - c) Conduct retrospectives
 - d) Visualize work and its progress
15. Which principle is central to Kanban? []
- a) Time-boxing tasks
 - b) Limiting work in progress
 - c) Focusing on roles
 - d) Fixed schedules
16. What is a Sprint Backlog? []
- a) Tasks selected for a sprint
 - b) A list of all project requirements
 - c) Completed work
 - d) A long-term roadmap
17. Sprint Planning involves: []
- a) Selecting and committing to user stories
 - b) Reviewing team performance
 - c) Resolving team conflicts
 - d) Conducting technical discussions
18. Agile workflows are often visualized using: []
- a) Gantt charts
 - b) Excel sheets
 - c) Boards (Kanban or Scrum)
 - d) PERT diagrams
19. An Agile team should be: []
- a) Cross-functional and self-organizing
 - b) Hierarchical
 - c) Managed directly by the Scrum Master
 - d) Divided by specialization
20. A key responsibility of the Scrum Master is to: []
- a) Define the product vision
 - b) Assign tasks to team members
 - c) Facilitate Scrum ceremonies and remove impediments
 - d) Approve deliverables
21. Effective collaboration in Agile is fostered by: []
- a) Lengthy meetings
 - b) Clear role separation
 - c) Open communication and feedback
 - d) Strict adherence to plans



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22. What is a common tool for tracking sprint progress? []
- a) Burndown chart
 - b) Burnup chart
 - c) Critical path analysis
 - d) Gantt chart
23. Agile metrics focus on: []
- a) Measuring value delivery and team performance
 - b) Resource allocation
 - c) Project profit margins
 - d) Detailed task breakdowns
24. Agile project status reporting should: []
- a) Be detailed and extensive
 - b) Focus on key metrics and progress
 - c) Only be shared with management
 - d) Avoid mentioning challenges
25. What does SAFe stand for? []
- a) Scaled Agile Framework
 - b) Sustainable Agile Framework
 - c) Systematic Agile Framework
 - d) Scalable Agile Framework
26. Which framework focuses on scaling Agile across multiple teams? []
- a) Less
 - b) Scrum
 - c) XP
 - d) Kanban
27. Agile transformation is successful when: []
- a) Teams adhere to fixed workflows
 - b) The organization adopts a culture of collaboration and adaptability
 - c) Management takes control of team processes
 - d) Documentation increases
28. What is a key component of a Capstone project in Agile? []
- a) Writing extensive documentation
 - b) Applying Agile principles to a real-world scenario
 - c) Focusing solely on theory
 - d) Avoiding group collaboration
29. Case studies in Agile often highlight: []
- a) Failures in project management
 - b) Miscommunication in teams
 - c) Successful implementations of Agile practices
 - d) Extensive use of traditional methodologies


30. A successful group Agile project requires: []
- a) Individual contributors working independently
 - b) Collaboration, planning, and feedback
 - c) Extensive command-and-control management
 - d) Long, unstructured meetings
31. Agile methodologies are best suited for projects that are: []
- a) Predictable and repeatable
 - b) Fixed in scope and requirements
 - c) Complex and dynamic
 - d) Simple and static
32. The Agile Manifesto emphasizes: []
- a) Processes over tools
 - b) Responding to change over following a plan
 - c) Contracts over collaboration
 - d) Documentation over delivery
33. Which framework uses "sprints" for work iteration? []
- a) Scrum
 - b) Kanban
 - c) SAFe
 - d) XP
34. Kanban emphasizes the use of: []
- a) Continuous flow and limiting work in progress
 - b) Iterative development cycles
 - c) Fixed-length sprints
 - d) A rigid workflow
35. Extreme Programming (XP) recommends: []
- a) Isolated development
 - b) Minimal communication
 - c) Frequent communication and pair programming
 - d) Waterfall planning techniques
36. Which of the following best describes iterative development? []
- a) Refining the product through repeated cycles
 - b) Avoiding changes during development
 - c) Delivering the entire product at once
 - d) Prioritizing design over delivery
37. Agile's incremental delivery ensures: []
- a) Fixed budgets
 - b) Regular delivery of working software
 - c) Avoiding stakeholder feedback
 - d) Fixed deadlines


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38. **Estimation techniques in Agile focus on:** []
- a) Detailed task breakdowns
 - b) Exact time predictions
 - c) Relative sizing like story points
 - d) Avoiding estimation
39. **The Scrum Master is accountable for:** []
- a) Ensuring the Scrum process is followed
 - b) Assigning tasks to the team
 - c) Approving technical decisions
 - d) Defining product requirements
40. **The Sprint Review meeting is primarily for:** []
- a) Reflecting on team dynamics
 - b) Adjusting the Sprint goal
 - c) Discussing technical challenges
 - d) Demonstrating the increment to stakeholders
41. **A Scrum team's development work is described in:** []
- a) Burnup charts
 - b) Sprint Backlog
 - c) Product vision
 - d) Kanban board
42. **Cycle time measures:** []
- a) Total project duration
 - b) Time spent on backlog grooming
 - c) Time taken for a task to move from start to finish
 - d) Time allocated for team meetings
43. **Limiting Work in Progress (WIP) helps to:** []
- a) Increase multitasking
 - b) Extend delivery timelines
 - c) Improve focus and reduce bottlenecks
 - d) Add complexity to workflows
44. **A Kanban system is ideal for:** []
- a) Fixed iteration schedules
 - b) Teams with unpredictable workflows
 - c) Large-scale teams only
 - d) Projects with stable requirements
45. **What is the purpose of a Product Backlog?** []
- a) Prioritized list of features or tasks
 - b) Completed tasks for a sprint
 - c) Project documentation
 - d) Technical specifications


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46. **Sprint execution involves:** []
- a) Completing tasks selected in Sprint Planning
 - b) Revisiting project goals
 - c) Planning release dates
 - d) Designing workflows
47. **Agile workflows commonly rely on:** []
- a) Hierarchical task assignment
 - b) Visual tools like boards
 - c) Complex charts
 - d) Detailed timelines
48. **An Agile team leader should focus on:** []
- a) Facilitating and enabling the team
 - b) Directly managing all team activities
 - c) Enforcing strict processes
 - d) Controlling the team's decisions
49. **Effective conflict resolution in Agile teams involves:** []
- a) Avoiding discussions
 - b) Imposing decisions
 - c) Encouraging open communication and collaboration
 - d) Reassigning team members
50. **What is a hallmark of high-performing Agile teams?** []
- a) Strict adherence to hierarchy
 - b) Reliance on individual contributions
 - c) Extensive documentation
 - d) Strong collaboration and shared ownership



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1.2.1. Certificate/Value Added Courses

Question Paper

25. Bridge Course on Fundamentals of Statistics

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	BMB101	Bridge Course on Fundamentals of Statistics		Max Marks:50	Time: 1 Hr

Date :27.11.2021

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**


1. **What is the primary goal of statistics?** []
 - a) To manipulate data
 - b) To collect, analyze, and interpret data
 - c) To make data visualizations
 - d) To predict future events

2. **Which of the following is qualitative data?** []
 - a) Age of students
 - b) Gender of participants
 - c) Height of basketball players
 - d) Exam scores

3. **Which level of measurement is associated with ordered categories with no meaningful difference between values?** []
 - a) Nominal
 - b) Ordinal
 - c) Interval
 - d) Ratio


4. **The temperature in Celsius is an example of which level of measurement?** []
 - a) Nominal
 - b) Ordinal
 - c) Interval
 - d) Ratio

5. **Which of the following is NOT a scope of statistics?** []
 - a) Decision-making
 - b) Data collection
 - c) Infinite certainty
 - d) Trend analysis


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6. **What is the arithmetic average of a dataset called?** []
a) Mode
b) Mean
c) Median
d) Range
7. **What measure divides the dataset into two equal parts?** []
a) Mean
b) Mode
c) Median
d) Standard deviation
8. **Which measure of dispersion represents the difference between the maximum and minimum values?** []
a) Variance
b) Range
c) Standard deviation
d) Interquartile range
9. **What graphical representation is most suitable for categorical data?** []
a) Histogram
b) Scatter plot
c) Bar chart
d) Box plot
10. **A box plot is primarily used to display:** []
a) Frequency distributions
b) Measures of central tendency
c) Data spread and outliers
d) Probabilities
11. **What is the set of all possible outcomes of a random experiment?** []
a) Event
b) Trial
c) Probability space
d) Sample space
12. **If two events cannot occur simultaneously, they are said to be:** []
a) Independent
b) Mutually exclusive
c) Complementary
d) Certain
13. **The probability of an event happening is always between:** []
a) 0 and 10
b) -1 and 1
c) 0 and 1
d) None of the above


14. What is the probability of flipping a coin and getting heads or tails? []
- a) 0.25
 - b) 0.5
 - c) 2.0
 - d) 1.0
15. Which rule applies to finding the probability of two independent events happening together? []
- a) Addition rule
 - b) Complement rule
 - c) Multiplication rule
 - d) Bayes' theorem
16. Which of the following is a discrete probability distribution? []
- a) Normal distribution
 - b) Binomial distribution
 - c) Exponential distribution
 - d) Chi-square distribution
17. A normal distribution is symmetric around its: []
- a) Median
 - b) Mode
 - c) Mean
 - d) All of the above
18. The probability of success in a binomial distribution is denoted by: []
- a) p
 - b) q
 - c) n
 - d) $1 - p$
19. What shape does the normal distribution curve have? []
- a) Rectangular
 - b) Triangular
 - c) Skewed
 - d) Bell-shaped
20. Which property is true for a normal distribution? []
- a) It is skewed right
 - b) The mean, median, and mode are equal
 - c) It is defined only for positive values
 - d) It has no variance
21. Which sampling method ensures every member of the population has an equal chance of being selected? []
- a) Stratified sampling
 - b) Cluster sampling
 - c) Random sampling
 - d) Convenience sampling


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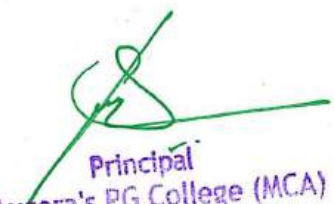
22. The Central Limit Theorem states that the sampling distribution of the sample mean: []
- a) Is always uniform
 - b) Is normally distributed for a large sample size
 - c) Is skewed
 - d) Is binomial
23. Which sampling method divides the population into groups and randomly selects entire groups? []
- a) Random sampling
 - b) Stratified sampling
 - c) Cluster sampling
 - d) Systematic sampling
24. A statistic calculated from a sample is called: []
- a) Parameter
 - b) Estimator
 - c) Population metric
 - d) Confidence interval
25. What is the purpose of sampling? []
- a) To avoid data collection
 - b) To manipulate data
 - c) To reduce biases completely
 - d) To study a part to infer about the whole
26. The null hypothesis (H_0) typically states: []
- a) A significant relationship exists
 - b) There is no effect or difference
 - c) Data is skewed
 - d) Results are inconclusive
27. A Type I error occurs when: []
- a) The null hypothesis is true but rejected
 - b) The null hypothesis is false but accepted
 - c) The alternative hypothesis is rejected
 - d) The p-value is large
28. What does ANOVA test for? []
- a) Differences in proportions
 - b) Differences between multiple means
 - c) Relationships between variables
 - d) Equality of medians
29. A chi-square test is used to analyze: []
- a) Means of two groups
 - b) Variances
 - c) Continuous data
 - d) Categorical data

30. The significance level (alpha) is usually set at: []
a) 0.1
b) 0.05
c) 0.01
d) 1.0
31. A Pearson correlation coefficient of 0 indicates: []
a) Perfect positive correlation
b) Weak correlation
c) Perfect negative correlation
d) No correlation
32. The dependent variable in regression analysis is also called: []
a) Predictor variable
b) Outcome variable
c) Independent variable
d) Covariate
33. In multiple regression, the number of predictors is: []
a) One
b) Two
c) More than one
d) Any number
34. The slope in a simple linear regression represents: []
a) The y-intercept
b) Change in the dependent variable per unit change in the independent variable
c) The correlation coefficient
d) The standard error
35. The correlation coefficient ranges between: []
a) -2 to 2
b) 0 to 1
c) -1 to 1
d) -0.5 to 0.5
36. Which software is specifically designed for statistical analysis? []
a) Excel
b) PowerPoint
c) Photoshop
d) SPSS
37. What is the first step when working with data in software? []
a) Visualizing the data
b) Importing and cleaning the data
c) Performing hypothesis testing
d) Creating complex models

38. Which software is open-source and widely used for statistical Programming? []
a) R
b) SPSS
c) SAS
d) Minitab
39. In Excel, which function calculates the mean? []
a) =MEAN()
b) =MEDIAN()
c) =MODE()
d) =AVERAGE()
40. Which plot is easily created in most statistical software? []
a) Geographic maps
b) Box plot
c) 3D scatter plot
d) Flowchart
41. Case studies in statistics often involve: []
a) Large theoretical data
b) Hypothetical scenarios
c) Real-world data analysis
d) Unrealistic assumptions
42. The first step in analyzing real-world data is: []
a) Visualization
b) Cleaning and preparation
c) Hypothesis testing
d) Regression analysis
43. Statistical reports should always include: []
a) Raw data only
b) Only graphs
c) Software commands
d) Interpretation of results
44. In a case study, hypothesis testing is used to: []
a) Confirm or reject assumptions
b) Clean data
c) Perform advanced modeling
d) Find missing data
45. Statistical methods help in decision-making by: []
a) Eliminating all risks
b) Providing evidence-based insights
c) Reducing computation time
d) Predicting with certainty


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46. **Advanced topics in statistics include:** []
- a) Bayesian analysis
 - b) Mean calculation
 - c) Bar chart creation
 - d) Sampling methods
47. **Reviewing key concepts ensures:** []
- a) Mastery of advanced topics
 - b) Better application of statistical methods
 - c) Avoiding software usage
 - d) Fewer errors in graphs
48. **Future directions in statistics often involve:** []
- a) Traditional methods only
 - b) Avoiding new technologies
 - c) Big data and machine learning
 - d) Focusing solely on descriptive statistics
49. **Recap sessions are useful for:** []
- a) Learning completely new material
 - b) Reinforcing previously learned concepts
 - c) Avoiding practical applications
 - d) Memorizing software commands
50. **Which is a key feature of modern statistical advancements?** []
- a) Decline in data importance
 - b) Reducing computational power
 - c) Focus only on theory
 - d) Integration with artificial intelligence



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1.2.1. Certificate/Value Added Courses

Question Paper

26. Certificate Program on HR Analytics

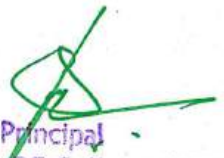
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB204	Certificate Program on HR Analytics		Max Marks:50	Time: 1 Hr

Date : 24.12.2021

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:


1. **What is the main purpose of HR Analytics?** []
a) Managing payroll
b) Analyzing HR data to improve decision-making
c) Designing training modules
d) Writing employee policies
2. **Which of the following is NOT a key role of data in HR?** []
a) Enhancing decision-making
b) Automating HR policies
c) Improving performance analysis
d) Forecasting workforce trends
3. **What does 'Mean' refer to in HR Analytics?** []
a) The most frequently occurring value
b) The middle value in a dataset
c) The average of all values
d) The difference between highest and lowest values
4. **Which term refers to patterns observed in historical HR data?** []
a) Predictive Analytics
b) Descriptive Analytics
c) Clustering
d) AI Analytics
5. **Which of the following best defines HR Analytics?** []
a) A process of visualizing data only
b) Analyzing HR data to drive organizational outcomes
c) Reporting payroll statistics
d) Collecting resumes for recruitment
6. **Which of these is a primary source of HR data?** []
a) Market surveys
b) Employee records
c) Financial forecasts
d) Press releases


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7. **What is a major concern when managing HR data?** []
a) Reducing employee leave
b) Improving recruitment channels
c) Ensuring data privacy and security
d) Conducting job fairs
8. **Which method is most suitable for gathering employee satisfaction Feedback?** []
a) Surveys
b) Job interviews
c) Financial reports
d) CRM tools
9. **What is the key focus of data quality in HR?** []
a) Ensuring accurate and consistent data
b) Limiting data to one department
c) Expanding workforce globally
d) Reducing employee benefits
10. **Why is data security critical in HR?** []
a) To store more resumes
b) To protect sensitive employee information
c) To speed up recruitment processes
d) To generate financial profits
11. **Which statistical measure shows the central value in a dataset?** []
a) Mean
b) Median
c) Mode
d) Variance
12. **What is used to visually represent HR data trends?** []
a) Text reports
b) Dashboards
c) Emails
d) HR policies
13. **Which of the following is NOT a descriptive analysis tool?** []
a) Pie chart
b) Regression analysis
c) Bar graph
d) Standard deviation
14. **How can organizations interpret performance trends?** []
a) By creating dashboards and charts
b) By collecting resumes
c) By reducing recruitment costs
d) By automating payroll processes
15. **What does 'Mode' refer to?** []
a) Average of data values
b) Most frequently occurring value
c) Middle value in a dataset
d) Data range

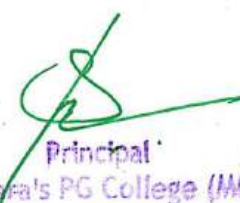
16. **What is the primary goal of predictive analytics?** []
a) Collecting HR data
b) Predicting future HR outcomes
c) Visualizing historical data
d) Automating HR systems
17. **Which technique is commonly used for predictive analysis?** []
a) Forecasting
b) Pie chart analysis
c) Histogram creation
d) Employee interviews
18. **What is a use case for predictive analytics in HR?** []
a) Measuring current employee engagement
b) Predicting employee turnover
c) Generating recruitment ads
d) Reducing interview duration
19. **Regression analysis is used to:** []
a) Predict relationships between variables
b) Describe historical data trends
c) Collect survey data
d) Enhance payroll systems
20. **Predictive models help organizations:** []
a) Make data-driven HR decisions
b) Eliminate workforce planning
c) Reduce employee surveys
d) Create recruitment forms
21. **Which of the following applies machine learning to HR?** []
a) Payroll management
b) Predicting employee attrition
c) Job posting
d) Resume formatting
22. **Text Analytics is commonly used for:** []
a) Employee feedback analysis
b) Recruitment advertisements
c) Attendance records
d) Workforce forecasting
23. **Clustering techniques group:** []
a) Similar data points together
b) Unrelated workforce policies
c) HR managers
d) Payroll data
24. **What does sentiment analysis measure?** []
a) Workforce planning efficiency
b) Employee emotions and feedback
c) Recruitment effectiveness
d) Employee salaries
25. **AI in HR Analytics helps with:** []
a) Advanced predictive insights
b) Employee benefits planning
c) Paper documentation
d) Payroll generation

26. **What does 'Time-to-Fill' measure?** []
a) Recruitment costs
b) Average time to hire a candidate
c) Candidate experience
d) Onboarding success
27. **Cost-per-Hire is used to:** []
a) Track recruitment expenses
b) Analyze employee satisfaction
c) Forecast employee turnover
d) Monitor workforce utilization
28. **Which metric measures recruitment effectiveness?** []
a) Cost-per-Hire
b) Attrition rate
c) Employee productivity
d) Mean salary range
29. **What data is essential for recruitment analysis?** []
a) Employee records
b) Performance data
c) Recruitment metrics
d) Financial reports
30. **Improving recruitment strategies involves:** []
a) Analyzing recruitment metrics
b) Increasing employee bonuses
c) Automating leave management
d) Conducting interviews only
31. **Which data helps analyze employee performance?** []
a) Attendance data
b) Performance reviews
c) Social media data
d) Recruitment logs
32. **Employee engagement can be measured through:** []
a) Surveys
b) Predictive models
c) Regression analysis
d) Payroll reports
33. **Turnover analysis focuses on:** []
a) Employee retention rates
b) Cost-per-Hire
c) Mean performance scores
d) Absenteeism trends
34. **What is a key metric for retention analytics?** []
a) Attrition rate
b) Cost-per-Hire
c) Engagement score
d) Training hours
35. **Workforce planning involves:** []
a) Forecasting workforce needs
b) Increasing salaries
c) Simplifying recruitment policies
d) Automating surveys


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36. Which of the following data is most relevant for analyzing employee performance? []
- Training hours
 - Customer feedback
 - Employee performance ratings
 - Number of recruitment interviews
37. What is the primary goal of performance management analytics? []
- To improve employee engagement
 - To identify and analyze performance trends
 - To reduce turnover rates
 - To forecast workforce gaps
38. How can analytics enhance performance management processes? []
- By automating payroll systems
 - By identifying high and low performers
 - By simplifying leave approvals
 - By increasing recruitment budgets
39. Standard deviation in performance data measures: []
- The average performance score
 - The consistency of employee performance
 - The middle value of the dataset
 - The most frequent performance rating
40. Which trend would analytics help identify in performance management? []
- Rising attrition rates
 - Training program effectiveness
 - Skill gaps among teams
 - Cost-per-Hire trends
41. Which tool is most suitable for measuring employee engagement? []
- Performance reviews
 - Surveys and feedback forms
 - Clustering techniques
 - Financial forecasts
42. Attrition rate measures: []
- Employee engagement levels
 - Employees leaving an organization over a period
 - Average cost of recruitment
 - Number of training hours completed
43. Why is retention analytics important for organizations? []
- To analyze employee costs
 - To reduce turnover and retain talent
 - To streamline recruitment processes
 - To improve payroll accuracy
44. Employee satisfaction surveys primarily aim to: []
- Predict future performance
 - Understand the level of employee contentment
 - Forecast attrition rates
 - Measure time-to-fill vacancies
45. Which metric helps identify retention issues? []
- Cost-per-Hire
 - Time-to-Fill
 - Turnover rate
 - Performance score

46. **What is workforce planning primarily focused on?** []
a) Increasing employee salaries
b) Forecasting workforce needs and skill gaps
c) Reducing training programs
d) Simplifying recruitment tools
47. **Skill gap analysis helps organizations to:** []
a) Measure employee retention rates
b) Identify missing skills in the workforce
c) Automate HR decision-making
d) Track recruitment expenses
48. **Which of the following trends is analyzed in workforce planning?** []
a) Employee turnover trends
b) Time-to-Hire statistics
c) Recruitment advertising costs
d) Employee attendance patterns
49. **Utilization analysis measures:** []
a) Employee productivity levels
b) Financial budgets
c) Recruitment effectiveness
d) Engagement scores
50. **A data-driven workforce planning strategy focuses on:** []
a) Predicting and addressing future workforce needs
b) Reducing onboarding processes
c) Automating recruitment ads
d) Increasing payroll budgets



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1.2.1. Certificate/Value Added Courses

Question Paper

27. Bridge Course on Fundamentals of Programming

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	BMC101	Bridge Course on Fundamentals of Programming		Max Marks:50	Time: 1 Hr

Date :24.12.2021

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **Which of the following is a high-level programming language?** []
 - a) Assembly
 - b) Machine Code
 - c) Binary
 - d) Python

2. **What does syntax in programming refer to?** []
 - a) The order of hardware components
 - b) The design of an operating system
 - c) The set of rules defining how programs are written
 - d) The performance of the program

3. **Which step is essential before writing code?** []
 - a) Buying hardware
 - b) Setting up a programming environment
 - c) Learning to use spreadsheets
 - d) Learning advanced algorithms


4. **Which of these is a primitive data type?** []
 - a) Object
 - b) Dictionary
 - c) Array
 - d) Integer

5. **What is the purpose of type casting?** []
 - a) To convert one data type into another
 - b) To protect data in memory
 - c) To debug code efficiently
 - d) To write comments in the program

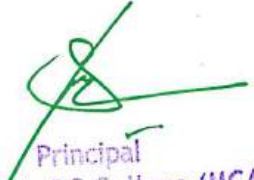
6. **What symbol is used to declare a constant in most programming languages?** []
a) @
b) \$
c) const
d) var
7. **Which of the following is an arithmetic operator?** []
a) ==
b) &&
c) +
d) ||
8. **What is the result of the expression $5 + 2 * 3$ in most programming languages?** []
a) 11
b) 21
c) 15
d) 7
9. **Logical operators are used for:** []
a) Combining multiple conditions
b) Calculating numeric values
c) Converting data types
d) Debugging programs
10. **Which keyword is used for a conditional statement?** []
a) case
b) loop
c) repeat
d) if
11. **What is the purpose of a for loop?** []
a) To execute a block once
b) To repeat a block a fixed number of times
c) To terminate a program
d) To handle exceptions
12. **What is an example of a nested control structure?** []
a) A loop inside a variable
b) Declaring functions inside a loop
c) An if statement inside a loop
d) Using relational operators
13. **What does a function return by default if no return value is specified?** []
a) 0
b) -1
c) null
d) void

14. **What is the scope of a variable declared inside a function?** []
- a) Global
 - b) Local
 - c) Static
 - d) Dynamic
15. **Which keyword is used to define a function?** []
- a) let
 - b) loop
 - c) def
 - d) var
16. **An array is:** []
- a) A collection of elements stored at contiguous memory locations
 - b) A single variable
 - c) An unorganized collection of data
 - d) A file system
17. **What is a characteristic of a multi-dimensional array?** []
- a) It contains only strings
 - b) It is faster than single-dimensional arrays
 - c) It uses rows and columns
 - d) It must have exactly two dimensions
18. **Which of the following is not a data structure?** []
- a) String
 - b) List
 - c) Array
 - d) Condition
19. **What is a runtime error?** []
- a) An error in the operating system
 - b) An error that occurs while the program is executing
 - c) An error in variable declaration
 - d) An error before compilation
20. **What is the purpose of a debugger?** []
- a) Writing new code
 - b) Generating reports
 - c) Enhancing application design
 - d) Identifying and fixing errors
21. **Which statement is used to handle exceptions?** []
- a) try-catch
 - b) try-except
 - c) debug-continue
 - d) loop-handle

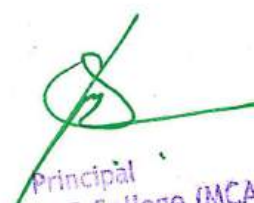
22. **What is the key feature of an algorithm?** []
- a) Complex design
 - b) Random execution
 - c) A clear set of instructions
 - d) Unlimited steps
23. **Which sorting algorithm is based on repeatedly swapping adjacent elements?** []
- a) Merge Sort
 - b) Bubble Sort
 - c) Quick Sort
 - d) Binary Sort
24. **What is the time complexity of a linear search?** []
- a) $O(1)$
 - b) $O(n^2)$
 - c) $O(\log n)$
 - d) $O(n)$
25. **What is the primary purpose of project work in programming?** []
- a) To apply learned concepts
 - b) To improve operating systems
 - c) To learn new programming languages
 - d) To copy existing solutions
26. **How should a project presentation ideally end?** []
- a) With code debugging
 - b) With unanswered questions
 - c) With a discussion of solutions
 - d) By rewriting code
27. **Integrating programming constructs refers to:** []
- a) Combining loops, functions, and structures
 - b) Developing hardware
 - c) Writing standalone instructions
 - d) Avoiding debugging
28. **Reviewing concepts is important for:** []
- a) Learning new programming languages
 - b) Debugging errors
 - c) Ensuring foundational understanding
 - d) Avoiding algorithm implementation
29. **What is an example of an advanced topic?** []
- a) Conditional statements
 - b) Machine Learning
 - c) Arithmetic operators
 - d) Debugging tools


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30. **Where can a programmer find resources for further learning?** []
- a) Only in textbooks
 - b) From outdated libraries
 - c) Online courses and documentation
 - d) From hardware specifications
31. **Which is not a programming paradigm?** []
- a) Object-oriented
 - b) Procedural
 - c) Functional
 - d) Algorithmic
32. **What is an IDE in programming?** []
- a) Integrated Development Environment
 - b) Internal Debugging Extension
 - c) Interactive Data Executor
 - d) Input Design Editor
33. **A variable that cannot change during the execution of a program is:** []
- a) Static
 - b) Constant
 - c) Global
 - d) Dynamic
34. **What will the following code output? `print(type(3.14))` (in Python)** []
- a) `<class 'int'>`
 - b) `<class 'str'>`
 - c) `<class 'float'>`
 - d) `<class 'bool'>`
35. **Which of the following has the highest precedence in most programming languages?** []
- a) Logical operators
 - b) Relational operators
 - c) Arithmetic operators
 - d) Assignment operators
36. **What is the output of `8 % 3`?** []
- a) 2
 - b) 3
 - c) 1
 - d) 8
37. **The while loop is best used when:** []
- a) Iterations are fixed
 - b) The condition always evaluates to false
 - c) Iterations depend on a condition
 - d) Code should not be executed


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38. Which of these statements is valid in most programming languages? []
- a) if (x = 10)
 - b) if (x == 10)
 - c) if x := 10
 - d) if [x = 10]
39. A recursive function is one that: []
- a) Calls another function
 - b) Contains a loop
 - c) Calls itself
 - d) Returns multiple values
40. Which of the following is an invalid function name? []
- a) 2ndFunction
 - b) helper Function
 - c) calculate Sum
 - d) main function
41. Which of the following correctly initializes an array in C++? []
- a) int array = {1, 2, 3};
 - b) int array[] = {1, 2, 3};
 - c) int array[3] = {1, 2, 3};
 - d) array int[3] = {1, 2, 3};
42. How is a string typically represented in C? []
- a) A single character variable
 - b) A pointer
 - c) An integer array
 - d) A character array
43. Which type of error is detected during program execution? []
- a) Syntax error
 - b) Runtime error
 - c) Compilation error
 - d) Logical error
44. What is the purpose of a breakpoint in debugging? []
- a) To pause execution at a specific point
 - b) To improve the program speed
 - c) To terminate the program
 - d) To remove errors automatically
45. Which algorithm is based on divide-and-conquer? []
- a) Bubble Sort
 - b) Linear Search
 - c) Merge Sort
 - d) Selection Sort


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46. Which searching algorithm is efficient for sorted arrays? []
- a) Binary Search
 - b) Linear Search
 - c) Quick Search
 - d) Hash Search
47. When dividing tasks in a project, it is best to: []
- a) Work only on complex features first
 - b) Work without a plan
 - c) Break the project into manageable modules
 - d) Test only after completing the project
48. The key outcome of a programming project is: []
- a) A working program that meets requirements
 - b) Code written without comments
 - c) Using the latest tools
 - d) Completing it faster than planned
49. Which resource is best for advanced programming concepts? []
- a) Beginner tutorials
 - b) Official documentation and research papers
 - c) Random blog posts
 - d) Social media
50. Learning advanced topics like AI and machine learning requires a strong understanding of: []
- a) Debugging only
 - b) Random programming languages
 - c) Basic hardware components
 - d) Basic programming concepts and algorithms



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1.2.1. Certificate/Value Added Courses

Question Paper

28. Certificate Program on Cloud Computing and Virtualization

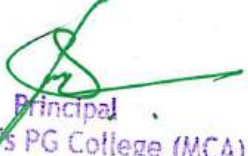
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC102	Certificate Program on Cloud Computing and Virtualization		Max Marks:50	Time: 1 Hr

Date :31.01.2022

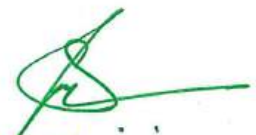
Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

1. **What is the primary advantage of cloud computing?** []
a) Faster hardware
b) Scalability
c) On-premises infrastructure
d) More RAM
2. **Which of the following is a Cloud Service Model?** []
a) Infrastructure as a Service (IaaS)
b) Virtualization
c) Network Configuration
d) API Management
3. **What is a Hybrid Cloud Deployment Model?** []
a) A combination of Public and Private Clouds
b) A completely on-premises solution
c) A vendor-specific cloud solution
d) A single cloud model for all businesses
4. **What is the core component of cloud computing architecture?** []
a) Clients
b) Virtualization
c) Networking hardware
d) Database servers
5. **Which technology allows multiple isolated environments to share a single Kernel?** []
a) Virtualization
b) Containers
c) Microservices
d) Clusters


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6. Which of the following is NOT a major cloud provider? []
- a) IBM Watson
 - b) AWS
 - c) Google Cloud
 - d) Microsoft Azure
7. What does a hypervisor do? []
- a) Manages application lifecycle
 - b) Ensures internet security
 - c) Enables virtualization by managing VMs
 - d) Configures container networks
8. Which type of virtualization involves abstracting the operating system? []
- a) Hardware virtualization
 - b) Network virtualization
 - c) OS virtualization
 - d) Storage virtualization
9. What is an example of application virtualization? []
- a) Running an app in a container
 - b) Creating virtual disks
 - c) Setting up a hypervisor
 - d) Using network switches
10. Which platform is known for container management? []
- a) VMware
 - b) Hyper-V
 - c) Kubernetes
 - d) KVM
11. What tool is primarily used for creating and managing containers? []
- a) Docker
 - b) Hyper-V
 - c) VMware
 - d) VirtualBox
12. Which hypervisor is open-source? []
- a) VMware vSphere
 - b) Hyper-V
 - c) KVM
 - d) Oracle VM
13. Which resource is NOT typically deployed in the cloud? []
- a) Compute resources
 - b) Mechanical equipment
 - c) Networking resources
 - d) Storage



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- 14. What does cloud scaling help achieve?** []
- a) Adjusting resources based on demand
 - b) Enforcing security policies
 - c) Migrating applications
 - d) Reducing costs
- 15. Which tool is commonly used for monitoring cloud resources?** []
- a) Docker
 - b) Kubernetes
 - c) CloudWatch
 - d) Hyper-V
- 16. What is a key consideration in cloud security?** []
- a) Deploying resources faster
 - b) Data protection and privacy
 - c) Managing hypervisors
 - d) Using open-source tools
- 17. What does regulatory compliance in the cloud ensure?** []
- a) Enhanced resource performance
 - b) Easier containerization
 - c) Adherence to legal and industry standards
 - d) Use of advanced hypervisors
- 18. Which is a best practice for securing cloud environments?** []
- a) Implementing strong access controls
 - b) Avoiding cloud storage
 - c) Limiting virtualization usage
 - d) Disabling monitoring tools
- 19. What is a fundamental step in setting up a hypervisor?** []
- a) Installing containers
 - b) Migrating applications
 - c) Configuring hardware resources
 - d) Monitoring performance
- 20. What is the advantage of using virtual machines?** []
- a) Isolation of workloads
 - b) Improved hypervisor speed
 - c) Reduction of network latency
 - d) Direct hardware access
- 21. Which is an advanced virtualization technique?** []
- a) OS-level networking
 - b) Nested virtualization
 - c) Physical clustering
 - d) Server cooling


- 22. What is the first step in cloud migration?** []
- a) Deploying containers
 - b) Optimizing costs
 - c) Assessing existing infrastructure
 - d) Upgrading hypervisors
- 23. Which tool aids in application migration?** []
- a) AWS Migration Hub
 - b) Docker Compose
 - c) Kubernetes CLI
 - d) Hyper-V Manager
- 24. What is a common method of integrating cloud services with on-premises systems?** []
- a) Using APIs
 - b) Disabling firewalls
 - c) Upgrading hardware
 - d) Manual backups
- 25. What is the purpose of a cloud cost model?** []
- a) To enhance virtualization
 - b) To improve storage efficiency
 - c) To predict and manage expenses
 - d) To scale computing power
- 26. Which tool is commonly used for cost management?** []
- a) AWS Cost Explorer
 - b) Hyper-V Manager
 - c) Docker Hub
 - d) VirtualBox
- 27. What can help optimize cloud costs?** []
- a) Increasing virtual machines
 - b) Disabling resource monitoring
 - c) Rightsizing resources
 - d) Avoiding containerization
- 28. What is the primary goal of a capstone project in cloud computing?** []
- a) Learning to program APIs
 - b) Applying theoretical knowledge to practical scenarios
 - c) Configuring hypervisors
 - d) Upgrading virtualization tools
- 29. Which is an example of a successful case study?** []
- a) Migrating an enterprise to AWS
 - b) Setting up a physical server
 - c) Developing a standalone application
 - d) Disabling virtual machines

- 30. What is a key component of group projects?** []
- a) Building new hardware
 - b) Using only private clouds
 - c) Collaboration and solution design
 - d) Reducing container usage
- 31. Which of these is NOT a cloud service model?** []
- a) Platform as a Service (PaaS)
 - b) Database as a Service (DaaS)
 - c) Software as a Service (SaaS)
 - d) Infrastructure as a Service (IaaS)
- 32. Public cloud deployment typically offers:** []
- a) Shared resources accessible over the internet
 - b) Exclusive resources for a single organization
 - c) A mix of on-premises and cloud environments
 - d) No scalability
- 33. Which technology facilitates dynamic resource allocation in cloud environments?** []
- a) Virtualization
 - b) Static provisioning
 - c) Manual configuration
 - d) Fixed hardware setups
- 34. What is a key benefit of microservices in cloud computing?** []
- a) Centralized application management
 - b) Dependency on monolithic architecture
 - c) Improved scalability and modularity
 - d) Reduced resource utilization
- 35. A Type-1 hypervisor runs:** []
- a) Directly on the hardware
 - b) On top of an operating system
 - c) Within a container
 - d) Inside another hypervisor
- 36. Which type of virtualization is most commonly used for creating isolated user environments?** []
- a) Desktop virtualization
 - b) Network virtualization
 - c) Hardware virtualization
 - d) Storage virtualization
- 37. What is VMware primarily known for?** []
- a) Cloud cost management
 - b) Virtualization solutions
 - c) Container orchestration
 - d) Database services

- 38. Kubernetes is best described as:** []
- a) A hypervisor
 - b) A virtualization tool
 - c) A container orchestration platform
 - d) A network management utility
- 39. Which service is commonly used to deploy compute resources in AWS?** []
- a) S3
 - b) EC2
 - c) RDS
 - d) DynamoDB
- 40. What does cloud resource optimization focus on?** []
- a) Increasing expenses
 - b) Reducing resource scaling
 - c) Maximizing efficiency while minimizing costs
 - d) Limiting deployment automation
- 41. Which framework provides security guidelines for cloud providers?** []
- a) ISO/IEC 32000
 - b) ISO/IEC 27001
 - c) TCP/IP framework
 - d) The ITIL framework
- 42. Multi-factor authentication enhances security by:** []
- a) Reducing user roles
 - b) Requiring multiple forms of identity verification
 - c) Limiting container usage
 - d) Enabling automatic scaling
- 43. What is a primary advantage of nested virtualization?** []
- a) Reduced container costs
 - b) Direct access to hardware
 - c) Running virtual machines within virtual machines
 - d) Increased physical storage
- 44. A common use case for virtualization is:** []
- a) Disaster recovery
 - b) Physical hardware upgrades
 - c) Simplifying manual processes
 - d) Network cable management
- 45. Which approach ensures minimal downtime during cloud migration?** []
- a) Hybrid migration
 - b) Full migration in a single phase
 - c) Manual data replication
 - d) Ignoring legacy systems


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- 46. A lift-and-shift migration strategy involves:** []
- a) Rebuilding applications
 - b) Moving applications without significant changes
 - c) Developing entirely new software
 - d) Decommissioning all resources
- 47. Rightsizing cloud resources primarily means:** []
- a) Using the largest resources available
 - b) Ignoring performance metrics
 - c) Matching resources to actual usage requirements
 - d) Consolidating all workloads
- 48. Which of these is a pricing model used by cloud providers?** []
- a) Pay-as-you-go
 - b) One-time payment
 - c) Fixed-rate subscription only
 - d) Annual fee only
- 49. A capstone project in cloud computing typically focuses on:** []
- a) Real-world application of theoretical concepts
 - b) Writing research papers
 - c) Upgrading hardware components
 - d) Managing local databases
- 50. Which is a key factor in successful cloud case studies?** []
- a) Avoiding advanced technologies
 - b) Ignoring cost considerations
 - c) Using a single cloud service
 - d) Demonstrating efficiency and scalability



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1.2.1. Certificate/Value Added Courses

Question Paper

29. Certificate Program on Corporate Governance


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB102	Certificate Program on Corporate Governance	Max Marks:50	Time: 1 Hr	

Date :25.02.2022

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	


Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What is the primary goal of corporate governance?** []
A) Maximizing shareholder wealth
B) Ensuring accountability and transparency
C) Minimizing operational costs
D) Strengthening market competition
2. **Which document marked a significant step in the historical evolution of corporate governance?** []
A) Basel III Accord
B) Cadbury Report
C) Sarbanes-Oxley Act
D) Dodd-Frank Act
3. **Which body typically has the highest authority in a corporation's governance structure?** []
A) Board of directors
B) Audit committee
C) Executive management
D) Regulatory agencies
4. **Which committee oversees financial reporting and auditing?** []
A) Nomination committee
B) Audit committee
C) Compensation committee
D) Stakeholder committee
5. **The Anglo-American governance model emphasizes:** []
A) Stakeholder rights
B) Shareholder primacy
C) Regulatory dominance
D) Collective decision-making



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6. Which of the following best represents stakeholder interests in Governance? []
- A) Maximizing profits
 - B) Following only legal requirements
 - C) Balancing financial and non-financial interests
 - D) Reducing board oversight
7. Corporate ethics primarily focus on: []
- A) Increasing profitability
 - B) Promoting moral behavior within organizations
 - C) Reducing compliance costs
 - D) Strengthening legal frameworks
8. A code of conduct serves to: []
- A) Replace legal compliance frameworks
 - B) Guide ethical behavior in organizations
 - C) Avoid regulatory scrutiny
 - D) Define financial goals
9. Who is primarily responsible for implementing corporate ethics programs? []
- A) Shareholders
 - B) Board of directors
 - C) Ethics officers
 - D) Financial auditors
10. Which regulation was enacted in response to corporate scandals like Enron? []
- A) GDPR
 - B) Sarbanes-Oxley Act (SOX)
 - C) Dodd-Frank Act
 - D) Basel II
11. The GDPR primarily focuses on: []
- A) Data protection and privacy
 - B) Financial reporting
 - C) Risk management
 - D) Corporate tax compliance
12. Compliance programs aim to: []
- A) Reduce tax liability
 - B) Limit shareholder influence
 - C) Ensure adherence to laws and regulations
 - D) Improve product design
13. Risk management frameworks are designed to: []
- A) Eliminate all risks
 - B) Streamline operations
 - C) Increase revenue
 - D) Identify, assess, and mitigate risks

14. Which is a core component of internal controls? []
A) Product development
B) Monitoring mechanisms
C) Customer satisfaction
D) Market analysis
15. Auditing practices primarily serve to: []
A) Expand market share
B) Improve employee retention
C) Ensure accuracy in financial reporting
D) Increase innovation
16. Which framework helps analyze ethical dilemmas? []
A) SWOT analysis
B) Ethical decision-making models
C) Financial modeling
D) Corporate benchmarking
17. An ethical dilemma occurs when: []
A) Two or more ethical values are in conflict
B) There is a financial loss
C) Regulations are unclear
D) Corporate profits decline
18. The best strategy for resolving ethical conflicts is to: []
A) Prioritize short-term gains
B) Engage stakeholders in dialogue
C) Ignore minor issues
D) Focus solely on shareholder value
19. CSR involves: []
A) Integrating social and environmental concerns into business operations
B) Maximizing short-term profits
C) Avoiding public criticism
D) Reducing employee turnover
20. Which tool measures CSR performance? []
A) ROI metrics
B) Financial audits
C) Sustainability reports
D) Shareholder statements
21. A key principle of CSR is: []
A) Regulatory compliance
B) Sustainable development
C) Profit maximization
D) Cost reduction



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- 22. Ethical leadership primarily focuses on:** []
- A) Increasing shareholder returns
 - B) Strictly enforcing rules
 - C) Inspiring ethical behavior among employees
 - D) Outsourcing compliance responsibilities
- 23. Which strategy promotes ethical behavior?** []
- A) Offering financial incentives
 - B) Reducing compliance audits
 - C) Encouraging transparency in decision-making
 - D) Minimizing employee engagement
- 24. Case studies of ethical leadership often demonstrate:** []
- A) The importance of market dominance
 - B) The role of competitive pricing
 - C) How leadership shapes corporate culture
 - D) Profit-first strategies
- 25. One lesson from governance failures like Enron is to:** []
- A) Strengthen internal controls and transparency
 - B) Rely solely on market forces
 - C) Reduce board oversight
 - D) Limit shareholder influence
- 26. A comparative analysis of governance models highlights:** []
- A) Universal best practices
 - B) Variations in stakeholder priorities
 - C) The irrelevance of cultural factors
 - D) The importance of financial ratios
- 27. High-profile scandals underline the importance of:** []
- A) Avoiding market risks
 - B) Ethical decision-making and accountability
 - C) Reducing operating costs
 - D) Ignoring non-financial metrics
- 28. ESG stands for:** []
- A) Economic, Social, and Governance
 - B) Ethical, Social, and Goals
 - C) Environmental, Social, and Governance
 - D) Equity, Strategy, and Growth
- 29. Digital transformation impacts corporate governance by:** []
- A) Enhancing transparency and decision-making
 - B) Increasing operational costs
 - C) Reducing stakeholder engagement
 - D) Limiting regulatory compliance

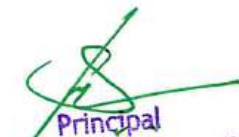

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- 30. The capstone project involves:** []
- A) Reviewing only past case studies
 - B) Developing a governance and ethics framework
 - C) Designing financial strategies
 - D) Analyzing market risks
- 31. The importance of corporate governance lies in its ability to:** []
- A) Maximize profits
 - B) Ensure accountability, fairness, and transparency
 - C) Reduce operational complexity
 - D) Avoid external regulation
- 32. A key responsibility of executive management in governance is to:** []
- A) Create policies for board elections
 - B) Monitor board performance
 - C) Implement strategies approved by the board
 - D) Oversee regulatory agencies
- 33. Which governance model emphasizes long-term stakeholder value?** []
- A) Anglo-American model
 - B) Global standard model
 - C) Asian model
 - D) Continental European model
- 34. Shareholder rights include:** []
- A) Approving marketing strategies
 - B) Direct involvement in operations
 - C) Voting on major corporate decisions
 - D) Managing executive teams
- 35. Corporate ethics can best be described as:** []
- A) A set of financial regulations
 - B) The principles guiding moral behavior in business
 - C) Strategies to minimize taxes
 - D) Legal compliance frameworks
- 36. A well-designed code of conduct helps an organization by:** []
- A) Establishing clear expectations for ethical behavior
 - B) Eliminating all ethical risks
 - C) Replacing corporate strategy
 - D) Increasing product sales
- 37. The Dodd-Frank Act was introduced to:** []
- A) Strengthen consumer protection in data privacy
 - B) Reform financial regulation after the 2008 crisis
 - C) Simplify corporate taxation
 - D) Reduce board responsibilities

38. Which body enforces GDPR compliance? []
- A) The SEC
 - B) Financial regulators
 - C) Data protection authorities
 - D) ISO
39. Which is a primary objective of risk management? []
- A) Eliminating stakeholder influence
 - B) Minimizing adverse impacts of risks
 - C) Reducing investment costs
 - D) Simplifying internal policies
40. Internal controls are evaluated for: []
- A) Effectiveness in achieving compliance and operational goals
 - B) Financial growth
 - C) Customer feedback
 - D) Market expansion
41. The utilitarian approach to ethical decision-making focuses on: []
- A) Following traditions
 - B) Avoiding conflict
 - C) Protecting individual rights
 - D) Maximizing benefits for the greatest number
42. A common business ethical dilemma is: []
- A) Lowering product quality for higher profits
 - B) Balancing profit goals with social responsibilities
 - C) Reducing customer service hours
 - D) Delaying product launches
43. CSR reporting often includes: []
- A) Marketing campaigns
 - B) Cost-benefit analyses
 - C) Environmental and social impact assessments
 - D) Competitor strategies
44. Integrating CSR into corporate strategy requires: []
- A) Focusing on short-term goals
 - B) Aligning social goals with business objectives
 - C) Reducing transparency
 - D) Increasing financial audits
45. The foundation of an ethical culture in a corporation is: []
- A) Regulatory compliance
 - B) Profitability
 - C) Leadership commitment to ethical principles
 - D) Financial planning


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46. Promoting ethical behavior among employees is achieved by: []
- A) Increasing penalties for non-compliance
 - B) Limiting employee involvement
 - C) Providing ethics training and clear guidelines
 - D) Focusing solely on performance metrics
47. Governance failures, such as the collapse of Lehman Brothers, highlight: []
- A) The role of market speculation
 - B) The need for strong risk management practices
 - C) The value of aggressive financial strategies
 - D) The importance of reduced regulation
48. A comparative study of governance in tech and manufacturing industries Shows: []
- A) Ethical challenges vary based on industry-specific risks
 - B) Governance principles differ significantly
 - C) CSR has no relevance in manufacturing
 - D) Risk management is irrelevant in tech
49. Emerging trends in corporate governance emphasize: []
- A) Short-term financial gains
 - B) Integration of ESG and digital governance strategies
 - C) Simplifying board structures
 - D) Reducing stakeholder engagement
50. The purpose of the capstone project is to: []
- A) Analyze past governance failures
 - B) Evaluate market dynamics
 - C) Design a practical governance and ethics framework
 - D) Identify compliance gaps



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1.2.1. Certificate/Value Added Courses

Question Paper

30. Training Program on Chatbots

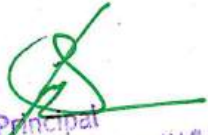
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	TMC202	Training Program on Chatbots		Max Marks:50	Time: 1 Hr

Date : 25.02.2022


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

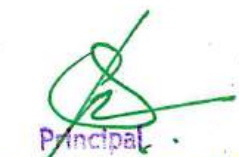
- What is a chatbot?** []
 - A type of hardware device
 - A software application designed to simulate human conversation
 - A type of programming language
 - None of the above
- Which of the following is a common application of chatbots?** []
 - Customer support
 - Online gaming
 - Text editing
 - Website design
- Which milestone event contributed significantly to chatbot development?** []
 - The invention of the smartphone
 - The creation of ELIZA in the 1960s
 - The launch of Windows 95
 - The invention of email
- Chatbots are commonly used in which industries?** []
 - Healthcare
 - Retail
 - Banking
 - All of the above
- What is one key trend in the future of chatbots?** []
 - Less personalization
 - Increased use of AI and machine learning
 - Decrease in automation
 - Reduced integration with IoT
- What does NLP stand for?** []
 - Natural Linguistic Programming
 - Neural Linguistic Processing
 - Natural Language Processing
 - Network Layer Programming


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7. **Which of the following is NOT an NLP technique?** []
a) Sentiment analysis
b) Tokenization
c) Encryption
d) Entity recognition
8. **What is tokenization in NLP?** []
a) Dividing text into smaller units
b) Encrypting a message
c) Translating text into another language
d) Assigning emotions to text
9. **Sentiment analysis helps to:** []
a) Recognize entities in text
b) Determine the emotional tone of text
c) Translate languages
d) Break down sentences into tokens
10. **Which algorithm is often used for text classification?** []
a) K-means clustering
b) Decision trees
c) Naive Bayes
d) Principal Component Analysis (PCA)
11. **What is the primary goal of conversational design?** []
a) Creating complex algorithms
b) Developing engaging and natural dialogue flows
c) Optimizing chatbot storage
d) Minimizing NLP usage
12. **User intent refers to:** []
a) The background information of a user
b) The action or goal a user wants to achieve
c) The error rate of a chatbot
d) None of the above
13. **Which of the following improves conversational design?** []
a) Static responses
b) Contextual understanding
c) Minimal testing
d) Limited options for user input
14. **What is a dialogue flow?** []
a) The backend system of a chatbot
b) The path a conversation takes based on user inputs
c) A technique for data encryption
d) None of the above
15. **What helps chatbots handle user errors?** []
a) Rigid structures
b) Predefined fallback messages
c) Ignoring inputs
d) Disconnecting users


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16. Which is NOT a popular chatbot development framework? []
a) Dialog Flow
b) Rasa
c) Microsoft Bot Framework
d) MS Paint
17. What programming language is commonly used with Rasa? []
a) Python
b) Java
c) C++
d) Ruby
18. Dialog Flow is a chatbot framework developed by: []
a) Microsoft
b) Apple
c) Google
d) Amazon
19. Which chatbot framework allows integration with multiple platforms? []
a) Rasa
b) Microsoft Bot Framework
c) Dialog Flow
d) All of the above
20. During chatbot development, what is a key step? []
a) Ignoring testing
b) Defining intents and entities
c) Avoiding user input handling
d) Skipping dialogue flows
21. Which is NOT a messaging platform? []
a) Facebook Messenger
b) WhatsApp
c) Slack
d) Microsoft Word
22. Which messaging platform is owned by Meta? []
a) Slack
b) Facebook Messenger
c) Telegram
d) Discord
23. Why is chatbot integration important? []
a) To enable chatbots to communicate with users on different platforms
b) To increase chatbot storage
c) To avoid API usage
d) To reduce compatibility
24. What is typically required for platform integration? []
a) APIs
b) Tokens
c) Authentication
d) All of the above


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25. **Deployment of a chatbot includes:** []
a) Designing conversational flows
b) Running the chatbot on a specific platform
c) Both a and b
d) None of the above
26. **Multi-turn conversations involve:** []
a) Single-step responses
b) Multiple interactions between the user and the bot
c) Static answers
d) None of the above
27. **Contextual understanding allows chatbots to:** []
a) Ignore user input
b) Use prior conversation context to improve responses
c) Increase processing time
d) Avoid user errors
28. **Personalization in chatbots refers to:** []
a) Customizing responses based on user data
b) Adding static responses
c) Avoiding user-specific details
d) Disabling contextual understanding
29. **Handling ambiguity in chatbot design means:** []
a) Ignoring user confusion
b) Providing clarification or asking follow-up questions
c) Using complex language
d) Avoiding NLP altogether
30. **What is the key for designing complex interactions?** []
a) Simple user flows
b) Robust error handling mechanisms
c) Avoiding advanced NLP techniques
d) Ignoring feedback
31. **What is the purpose of chatbot testing?** []
a) To improve performance and identify issues
b) To avoid user interactions
c) To reduce storage size
d) To disable fallback messages
32. **Which method is used to analyze chatbot interactions?** []
a) Data analysis
b) User feedback
c) Session logs
d) All of the above
33. **A/B testing in chatbots involves:** []
a) Comparing different versions of responses or designs
b) Automating responses
c) Ignoring performance metrics
d) Avoiding user feedback


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34. **What is a common optimization strategy for chatbots?** []
a) Ignoring analytics
b) Regularly updating intents and entities
c) Avoiding user input analysis
d) Reducing testing efforts
35. **What tool can help monitor chatbot performance?** []
a) Analytics platforms
b) User interface tools
c) Spreadsheet software
d) Chatbot flow editors
36. **Why is security important in chatbot development?** []
a) To prevent unauthorized access to sensitive data
b) To increase bot speed
c) To simplify responses
d) To improve design quality
37. **Which is a potential security risk in chatbots?** []
a) Data breaches
b) Weak authentication mechanisms
c) Injection attacks
d) All of the above
38. **What is a best practice for data protection in chatbots?** []
a) Storing sensitive data unencrypted
b) Using secure APIs for data transfer
c) Sharing user data with third parties
d) Avoiding authentication mechanisms
39. **Which regulation governs data privacy in the European Union?** []
a) GDPR
b) HIPAA
c) PCI DSS
d) CCPA
40. **Chatbots should inform users about:** []
a) Data collection and usage policies
b) Technical implementation details
c) API specifications
d) Developer credentials
41. **Which industry has widely adopted chatbots for customer service?** []
a) Healthcare
b) Banking
c) Retail
d) All of the above
42. **A successful chatbot implementation in healthcare involves:** []
a) Providing appointment scheduling and symptom checks
b) Replacing doctors
c) Avoiding patient interaction
d) Diagnosing diseases without supervision


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43. **In banking, chatbots are commonly used for:** []
a) Transaction history inquiries
b) Fraud detection alerts
c) Customer support
d) All of the above
44. **What is a key lesson learned from real-world chatbot deployments?** []
a) User feedback improves chatbot performance
b) Chatbots eliminate human roles entirely
c) NLP is unnecessary for success
d) Security concerns are negligible
45. **A retail chatbot can help users by:** []
a) Offering product recommendations
b) Assisting with order tracking
c) Providing personalized discounts
d) All of the above
46. **Chatbots integrated with IoT devices are likely to:** []
a) Enable smart home automation
b) Provide limited functionality
c) Avoid voice interaction
d) Focus on text-based input only
47. **What emerging technology can enhance chatbot interactions?** []
a) Augmented Reality (AR)
b) Blockchain
c) Virtual Reality (VR)
d) All of the above
48. **Future chatbots will rely more on:** []
a) Artificial Intelligence and machine learning
b) Manual scripting of responses
c) Static dialogue flows
d) Limited user personalization
49. **How might AR/VR impact chatbot use cases?** []
a) By creating immersive conversational experiences
b) By reducing their importance
c) By eliminating the need for NLP
d) By focusing solely on text interactions
50. **A key future trend in chatbot development is:** []
a) Advanced contextual understanding
b) Decline in chatbot applications
c) Reduced automation
d) Simpler conversational designs



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1.2.1. Certificate/Value Added Courses

Question Paper

31. Certificate Program on Quantum Computing and Quantum Programming

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC205	Certificate Program on Quantum Computing and Quantum Programming		Max Marks:50	Time: 1 Hr

Date : 31.03.2022


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

- What is the fundamental difference between classical and quantum computing ?** []
A) Binary logic vs. fuzzy logic
B) Deterministic behavior vs. probabilistic behavior
C) Classical bits vs. quantum bits (qubits)
D) Linear circuits vs. nonlinear circuits
- Which principle is essential for quantum computing?** []
A) Newton's Laws
B) Theory of Relativity
C) Quantum Superposition
D) Electromagnetism
- Quantum mechanics primarily deals with systems at what scale?** []
A) Macroscopic
B) Astronomical
C) Microscopic
D) Global
- What is a key feature of quantum superposition?** []
A) Particles moving faster than light
B) A system existing in multiple states simultaneously
C) Energy transfer without loss
D) Matter being converted into energy
- What does a quantum computer use as its basic unit of information?** []
A) Byte
B) Bit
C) Qubit
D) Atom
- What property allows qubits to exist in multiple states at once?** []
A) Entanglement
B) Decoherence
C) Superposition
D) Interference

7. **Which quantum phenomenon links particles even when separated by large distances?** []
A) Quantum Tunneling
B) Quantum Entanglement
C) Quantum Decoherence
D) Quantum Interference
8. **What happens when a qubit is measured?** []
A) It enters a mixed state
B) It collapses to a definite classical state
C) It creates superposition
D) It generates entanglement
9. **Which of the following is a basic quantum gate?** []
A) AND Gate
B) NOT Gate
C) Hadamard Gate
D) XOR Gate
10. **What is the purpose of the Pauli-X gate?** []
A) Flip the phase of a qubit
B) Create entanglement
C) Act as a NOT gate on a qubit
D) Measure the qubit's state
11. **What is a key advantage of quantum algorithms?** []
A) Redundancy elimination
B) Speedup over classical counterparts for specific problems
C) Low energy consumption
D) Complete determinism
12. **Which quantum algorithm achieves an exponential speedup for integer factorization?** []
A) Grover's Algorithm
B) Deutsch-Jozsa Algorithm
C) Shor's Algorithm
D) Simon's Algorithm
13. **Quantum algorithms achieve "speedup" through what property?** []
A) Decoherence
B) Superposition and interference
C) Classical logic gates
D) Quantum tunneling
14. **What type of problems does Grover's Algorithm solve?** []
A) Optimization problems
B) Search problems
C) Cryptography problems
D) Data compression
15. **Which quantum concept is utilized for solving large-scale Computational problems?** []
A) Quantum Fourier Transform
B) Quantum Parallelism
C) Quantum Simulation
D) Quantum Compression

16. **Grover's Algorithm reduces the time complexity of search to:** []
A) $O(n)$
B) $O(n^2)$
C) $O(\sqrt{n})$
D) $O(\log n)$
17. **What kind of search problem does Grover's Algorithm address?** []
A) Structured search
B) Unstructured search
C) Linear search
D) Binary search
18. **Grover's Algorithm relies on:** []
A) Superposition and interference
B) Quantum entanglement only
C) Quantum measurement
D) Linear transformation
19. **The primary advantage of Grover's Algorithm is:** []
A) Quadratic speedup for search problems
B) Exponential speedup for factoring
C) Polynomial time for simulation
D) Faster I/O operations
20. **In Grover's Algorithm, the oracle does what?** []
A) Initializes the qubits
B) Flips the amplitude of the solution
C) Measures the qubit states
D) Reduces errors in computation
21. **Shor's Algorithm is used for:** []
A) Solving linear systems
B) Factorizing integers efficiently
C) Searching databases
D) Simulating quantum systems
22. **What is the runtime complexity of Shor's Algorithm?** []
A) $O(n)$
B) $O(\log n)$
C) Polynomial time
D) Exponential time
23. **What quantum concept is critical to Shor's Algorithm?** []
A) Quantum Entanglement
B) Quantum Fourier Transform
C) Quantum Decoherence
D) Quantum Tunneling
24. **Which problem does Shor's Algorithm render inefficient for classical Cryptography?** []
A) Symmetric encryption
B) RSA encryption
C) AES encryption
D) Elliptic Curve Cryptography



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25. **Shor's Algorithm significantly impacts which security field?** []
A) Quantum Networking
B) Cryptanalysis
C) Cybersecurity for IoT
D) Digital Forensics
26. **What is Qiskit?** []
A) A quantum programming language
B) A quantum hardware system
C) A classical compiler
D) A classical optimization tool
27. **Which programming language is most associated with Microsoft's quantum computing?** []
A) Python
B) Qiskit
C) Q#
D) MATLAB
28. **What does QUTIP stand for?** []
A) Quantum Tensor Programming
B) Quantum Toolkit in Python
C) Quantum Technology Integration Protocol
D) Quick Tool for Programming
29. **Which language is used to interface with IBM Quantum?** []
A) Qiskit
B) Q#
C) FORTRAN
D) JavaScript
30. **What is the purpose of quantum circuit simulation tools?** []
A) Design quantum hardware
B) Test quantum algorithms on classical computers
C) Enhance quantum coherence
D) Debug classical systems
31. **Quantum circuits are composed of:** []
A) Quantum gates
B) Logical gates
C) Quantum wires
D) Data streams
32. **The Hadamard Gate is commonly used to:** []
A) Measure qubits
B) Create superposition
C) Flip quantum states
D) Reverse operations
33. **What is the role of quantum measurement in circuits?** []
A) Create entanglement
B) Collapse qubits into a definite classical state
C) Apply quantum gates
D) Maintain superposition


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34. Which gate is used to flip the phase of a qubit in a quantum circuit? []
A) Pauli-X Gate
B) Pauli-Y Gate
C) Pauli-Z Gate
D) SWAP Gate
35. What is a quantum circuit simulator primarily used for? []
A) Physical construction of quantum hardware
B) Execution of quantum programs on classical hardware
C) Minimizing quantum errors
D) Creating entanglement between qubits
36. What does a controlled-NOT (CNOT) gate operate on? []
A) A single qubit
B) Two qubits (control and target)
C) Three qubits
D) Multiple qubits
37. Optimization of quantum circuits focuses on: []
A) Reducing the number of qubits
B) Increasing classical computation
C) Improving I/O speeds
D) Adding more quantum gates
38. The Quantum Fourier Transform (QFT) is central to which algorithm? []
A) Grover's Algorithm
B) Shor's Algorithm
C) Deutsch-Jozsa Algorithm
D) Variational Quantum Eigensolver
39. Which quantum concept is critical for error correction? []
A) Quantum Decoherence
B) Quantum Redundancy
C) Quantum Entanglement
D) Quantum Stabilizers
40. What is a key challenge for quantum machine learning algorithms? []
A) Lack of quantum gates
B) High decoherence rates
C) Small data sets
D) Excessive entanglement
41. Which algorithm provides polynomial-time speedup for solving linear Systems? []
A) Grover's Algorithm
B) Harrow-Hassidim-Lloyd (HHL) Algorithm
C) Shor's Algorithm
D) Quantum Fourier Transform
42. Quantum Error Correction primarily addresses: []
A) Loss of entanglement
B) Measurement collapse
C) Noise and decoherence
D) Quantum tunneling issues

43. Which industry benefits most from quantum optimization algorithms? []
A) Cryptography
B) Logistics and supply chain
C) Astronomy
D) Social Media
44. Quantum simulation is used extensively in: []
A) Financial modeling
B) Drug discovery and chemistry
C) Weather prediction
D) Retail industry
45. Why is quantum computing disruptive for cryptography? []
A) It makes encryption stronger
B) It can solve problems that classical systems cannot efficiently solve
C) It increases processing latency
D) It cannot break encryption algorithms
46. What is one major use of quantum computing in artificial intelligence? []
A) Image compression
B) Quantum-enhanced machine learning algorithms
C) Classical data clustering
D) Training classical neural networks
47. Which of the following is a real-world quantum computing application? []
A) Real-time classical simulations
B) RSA encryption cracking
C) Quantum chemistry simulations
D) Data entry automation
48. What is one major challenge for quantum computing scalability? []
A) Lack of classical processors
B) Decoherence and error rates
C) Energy consumption
D) Slow quantum gate operations
49. Quantum hardware primarily uses which types of systems? []
A) Superconducting qubits and trapped ions
B) Laser beams
C) Nanobots
D) Classical transistors
50. What is expected in the future of quantum computing? []
A) Immediate replacement of classical systems
B) Gradual development of fault-tolerant quantum computers
C) Elimination of all computational errors
D) Decreased use in research



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1.2.1. Certificate/Value Added Courses

Question Paper

32. Training Program on DataScience with Python

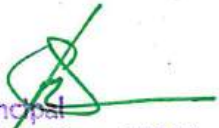
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	TMC101	Training Program on Data Science with Python		Max Marks:50	Time: 1 Hr

Date : 31.03.2022


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

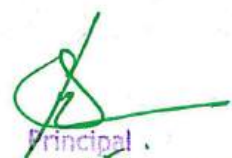
- Which of the following is a valid Python data type? []
a) String
b) Integer
c) List
d) All of the above
- Which library is primarily used for numerical computations in Python? []
a) Pandas
b) NumPy
c) Matplotlib
d) Scikit-learn
- What is the command to install a Python package using pip? []
a) python install package_name
b) install pip package_name
c) pip remove package_name
d) pip install package_name
- In Pandas, which method is used to read a CSV file? []
a) csv_open()
b) read_csv()
c) load_csv()
d) open_csv()
- Which IDE is popular for Python development? []
a) Eclipse
b) Jupyter Notebook
c) IntelliJ
d) NetBeans
- What does API stand for? []
a) Automated Program Interaction
b) Application Programming Interface
c) Application Programming Interface
d) Advanced Programming Interaction


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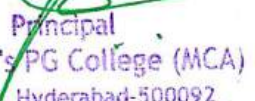
7. **Which library is commonly used for web scraping in Python?** []
a) Pandas
b) Seaborn
c) BeautifulSoup
d) NumPy
8. **JSON is short for:** []
a) Java Script Object Notation
b) Java Series Object Notation
c) JavaScript Object Notation
d) Joint Script Object Naming
9. **Which Python library is best suited for working with Excel files?** []
a) matplotlib
b) NumPy
c) openpyxl
d) sklearn
10. **What is a data pipeline?** []
a) A database querying method
b) A process for deploying machine learning models
c) A series of steps to collect, process, and store data
d) A function in Python
11. **What is data wrangling?** []
a) Formatting data for storage
b) Cleaning and organizing raw data for analysis
c) Collecting data
d) Visualizing data
12. **Which method is used to fill missing values in Pandas?** []
a) fill_null()
b) replace()
c) fillna()
d) dropna()
13. **How can outliers be detected in a dataset?** []
a) Using histograms
b) Using box plots
c) Using standard deviation thresholds
d) All of the above
14. **What is feature engineering?** []
a) Collecting additional data
b) Creating new features from existing data to improve model performance
c) Testing machine learning models
d) Eliminating irrelevant features
15. **Which library is primarily used for data wrangling?** []
a) NumPy
b) Pandas
c) Matplotlib
d) TensorFlow


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16. Which method provides a quick summary of a Pandas DataFrame? []
a) head()
b) info()
c) describe()
d) All of the above
17. Which library is most suitable for creating plots in Python? []
a) Pandas
b) Matplotlib
c) TensorFlow
d) NumPy
18. What is the purpose of EDA? []
a) Model evaluation
b) Hypothesis testing
c) Identifying patterns and insights from data
d) Data collection
19. Which visualization is best for displaying relationships between two continuous variables? []
a) Bar chart
b) Pie chart
c) Scatter plot
d) Histogram
20. Seaborn is built on top of which library? []
a) TensorFlow
b) Pandas
c) Matplotlib
d) NumPy
21. What is a p-value used for in hypothesis testing? []
a) Calculating mean
b) Measuring correlation
c) Determining statistical significance
d) Analyzing distributions
22. What type of regression is used for predicting binary outcomes? []
a) Linear regression
b) Ridge regression
c) Logistic regression
d) Polynomial regression
23. Which distribution is commonly used for modeling probabilities? []
a) Normal distribution
b) Poisson distribution
c) Binomial distribution
d) All of the above
24. What does statistical inference involve? []
a) Building machine learning models
b) Drawing conclusions about a population from sample data
c) Collecting raw data
d) Cleaning data

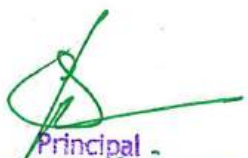

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25. **Which test is commonly used for comparing two means?** []
a) Chi-square test
b) Regression analysis
c) t-test
d) Z-test
26. **What is machine learning?** []
a) Programming algorithms manually
b) Teaching computers to learn patterns from data
c) Writing Python scripts for data analysis
d) Using AI to replace programming
27. **Which of the following is a supervised learning algorithm?** []
a) K-Means clustering
b) Decision trees
c) Principal Component Analysis (PCA)
d) Decision trees
28. **What is the main objective of regression models?** []
a) Classifying data
b) Predicting continuous values
c) Visualizing data
d) Reducing data dimensions
29. **What is overfitting?** []
a) A model underperforming on training data
b) A model performing well on training data but poorly on test data
c) Using too many features in the data
d) Optimizing a model beyond its limits
30. **What is a common metric for evaluating classification models?** []
a) Mean squared error
b) Accuracy
c) R-squared
d) Root mean square error
31. **What is an ensemble method?** []
a) Using multiple models to improve performance
b) Combining data sources
c) Creating deep learning models
d) Using multiple models to improve performance
32. **Which algorithm is a boosting method?** []
a) Random Forest
b) K-Means
c) Gradient Boosting
d) Linear Regression
33. **Neural networks are commonly used for:** []
a) Visualizing data
b) Deep learning tasks
c) Statistical inference
d) Cleaning data


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34. **What library is used for building deep learning models?** []
a) Pandas
b) NumPy
c) TensorFlow
d) Scikit-learn
35. **What is the role of activation functions in neural networks?** []
a) Optimizing models
b) Cleaning data
c) Introducing non-linearity into the model
d) Collecting features
36. **What does SQL stand for?** []
a) Sequential Query Language
b) Structured Query Language
c) Simplified Query Language
d) Standard Query Logic
37. **Which Python library is used for big data processing?** []
a) PySpark
b) NumPy
c) Matplotlib
d) Scikit-learn
38. **Which clause is used in SQL to filter rows?** []
a) GROUP BY
b) JOIN
c) WHERE
d) ORDER BY
39. **Which function in PySpark is used to read data?** []
a) read_data()
b) read()
c) open_data()
d) extract()
40. **What is the primary advantage of big data tools?** []
a) Data cleaning
b) Handling large-scale data efficiently
c) Visualization
d) Model evaluation
41. **What does Apache Airflow do?** []
a) Runs machine learning models
b) Manages data pipelines and workflows
c) Cleans data
d) Visualizes data
42. **What is a DAG in Airflow?** []
a) Data Aggregation Graph
b) Data Analysis Grid
c) Directed Acyclic Graph
d) Dataset Allocation Guide

43. **Which tool can automate repetitive tasks in Python?** []
a) Matplotlib
b) Scripting with Python
c) TensorFlow
d) Excel
44. **Why are workflows important in data science?** []
a) To ensure reproducibility
b) To manage complex processes
c) To improve efficiency
d) All of the above
45. **Which library can be used for automating ETL tasks?** []
a) Matplotlib
b) NumPy
c) Apache Airflow
d) Pandas
46. **What is a key concern in data ethics?** []
a) Data visualization
b) Protecting user privacy
c) Analyzing large datasets
d) Automating workflows
47. **What is GDPR?** []
a) Global Data Privacy Regulation
b) Generalized Data Protection Rules
c) General Data Protection Regulation
d) Global Data Protection Rights
48. **Which is an example of unethical data use?** []
a) Cleaning data
b) Visualizing patterns
c) Using data without consent
d) Automating tasks
49. **What is a capstone project?** []
a) A final exam
b) A large data collection task
c) A comprehensive project applying all course knowledge
d) A statistical test
50. **Why is data privacy important?** []
a) To follow ethical guidelines
b) To avoid legal penalties
c) To maintain trust with users
d) All of the above



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1.2.1. Certificate/Value Added Courses

Question Paper

33. Certificate Program on Mobile App Development

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC204	Certificate Program on Mobile App Development		Max Marks:50	Time: 1 Hr

Date : 16.10.2020

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	


Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. Which platform uses Xcode for development? []
 - a) Android
 - b) iOS
 - c) Windows
 - d) Web


2. Which programming language is primarily used for Android development? []
 - a) Swift
 - b) Kotlin
 - c) JavaScript
 - d) Python

3. What is the primary purpose of Android Studio? []
 - a) Manage APIs
 - b) Develop Android apps
 - c) Debug iOS apps
 - d) Design UI for Android apps

4. Which of the following is a major difference between iOS and Android development? []
 - a) Android uses Java, while iOS uses Kotlin.
 - b) iOS apps are developed using Android Studio.
 - c) iOS development is based on Swift, while Android uses Kotlin or Java.
 - d) Android apps only run on Windows.



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5. **Which programming language is used for iOS app development?** []
a) Java
b) Swift
c) C#
d) PHP
6. **What is the main development environment for Android apps?** []
a) Eclipse
b) Visual Studio
c) Android Studio
d) Xcode
7. **Which of the following is the primary language for Android development?** []
a) Python
b) Swift
c) Kotlin
d) JavaScript
8. **Which tool is essential for building iOS apps?** []
a) Eclipse
b) Xcode
c) Sublime Text
d) Visual Studio Code
9. **What does UI stand for in app development?** []
a) User Information
b) User Interface
c) User Interaction
d) User Input
10. **Which design guideline is used for Android apps?** []
a) Human Interface Guidelines
b) Material Design
c) UIKit
d) Google Design Principles
11. **What is the purpose of responsive UI design?** []
a) To make the app compatible with multiple platforms
b) To optimize app performance
c) To make the app visually appealing
d) To adapt the app layout to different screen sizes



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12. Which of the following is an important aspect of UX design? []
- a) Code optimization
 - b) App aesthetics
 - c) User navigation and interaction
 - d) App performance
13. Which Xcode tool is used to design the user interface for iOS apps? []
- a) Interface Builder
 - b) Simulator
 - c) SwiftUI
 - d) Core Data
14. In iOS development, what is the primary language used to write app logic? []
- a) Java
 - b) Kotlin
 - c) Swift
 - d) Objective-C
15. Which of the following is a core component of iOS apps used to display
Content ? []
- a) RecyclerView
 - b) TableView
 - c) ListView
 - d) Button
16. What is the role of a ViewController in iOS apps? []
- a) Store app data
 - b) Manage the app's user interface
 - c) Handle user input
 - d) Manage API requests
17. What tool does Android Studio provide for designing the user interface? []
- a) Interface Builder
 - b) Layout Editor
 - c) Storyboard
 - d) XAML Designer
18. Which component in Android is used to display a list of items? []
- a) ListView
 - b) RecyclerView
 - c) GridView
 - d) TableView

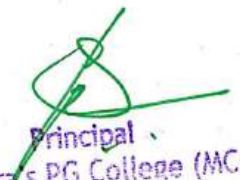
19. Which of the following is a key feature of Android Studio? []
- a) Debugging tools
 - b) Performance profiling
 - c) Code completion
 - d) All of the above
20. What is an Activity in Android development? []
- a) A background process
 - b) A UI component for interacting with users
 - c) A data storage component
 - d) A service for running long tasks
21. Which of the following is a navigation pattern used in mobile apps? []
- a) Tab Bar
 - b) Toolbar
 - c) GridView
 - d) Widget Drawer
22. Which architecture pattern is commonly used for iOS apps? []
- a) MVVM
 - b) MVP
 - c) MVC
 - d) MVP
23. What does MVVM stand for in app architecture? []
- a) Model-View-ViewModel
 - b) Model-View-Module
 - c) Model-Value-View
 - d) Machine-Vision-ViewModel
24. Which navigation pattern is commonly used in Android? []
- a) Drawer Navigation
 - b) Tab Bar
 - c) Navigation Controller
 - d) Menu Bar
25. Which iOS framework is used for data persistence? []
- a) Core Data
 - b) Room
 - c) SQLite
 - d) Shared Preferences


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26. **Which Android library is used for local database management?** []
- a) Core Data
 - b) Room
 - c) Realm
 - d) Firebase
27. **What is SQLite used for in mobile apps?** []
- a) Storing app settings
 - b) Data synchronization
 - c) Local data storage
 - d) Sending network requests
28. **What is Shared Preferences used for in Android?** []
- a) Saving large data
 - b) Storing small key-value pairs
 - c) Encrypting data
 - d) Persisting images
29. **Which protocol is commonly used for API communication in mobile apps?** []
- a) FTP
 - b) HTTP/HTTPS
 - c) SMTP
 - d) SSH
30. **What format is commonly used for data exchange in RESTful APIs?** []
- a) XML
 - b) JSON
 - c) CSV
 - d) YAML
31. **What is the purpose of using Retrofit in Android development?** []
- a) Handling user input
 - b) Making network requests
 - c) Managing local storage
 - d) Designing UI layouts
32. **What does OAuth 2.0 provide in mobile app development?** []
- a) User interface design
 - b) API rate limiting
 - c) Secure authentication and authorization
 - d) File storage

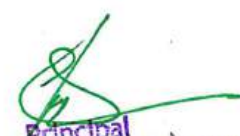

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33. **Which type of testing verifies individual units of code in mobile apps?** []
- a) Integration Testing
 - b) Unit Testing
 - c) UI Testing
 - d) System Testing
34. **What is the purpose of using the debugger in mobile development?** []
- a) Design the user interface
 - b) Optimize the app's performance
 - c) Identify and fix code errors
 - d) Test API requests
35. **Which tool helps in performance optimization in mobile apps?** []
- a) Xcode Profiler
 - b) Android Monitor
 - c) Visual Studio Code
 - d) All of the above
36. **What is UI testing used for in mobile app development?** []
- a) Verifying that the app runs without crashing
 - b) Testing the functionality of the user interface
 - c) Checking app performance
 - d) Ensuring correct API responses
37. **Which store is used to submit iOS apps?** []
- a) Google Play Store
 - b) App Store
 - c) Windows Store
 - d) Amazon App Store
38. **Which of the following is required to publish an iOS app on the App Store?** []
- a) Google account
 - b) Apple Developer Program membership
 - c) Android Studio
 - d) Core Data implementation
39. **What is an important task after deploying a mobile app?** []
- a) Forget user feedback
 - b) Ignore performance issues
 - c) Monitor app usage and user feedback
 - d) Remove all testing frameworks


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40. **What is the best way to handle app updates?** []
- a) Update the app without notifying users
 - b) Regularly release new versions to address bugs and improvements
 - c) Remove previous versions from the store
 - d) Avoid releasing any updates
41. **Which of the following is a benefit of continuous deployment in mobile app development?** []
- a) Faster time to market
 - b) No need for testing
 - c) Limited user feedback
 - d) Reduced app performance
42. **What is the best way to gather feedback from users after app deployment?** []
- a) Monitor social media posts
 - b) Use built-in analytics tools and feedback forms
 - c) Wait for customer support tickets
 - d) Ignore user comments
43. **Which is the most common reason for mobile app crashes after Deployment ?** []
- a) Poor user design
 - b) Lack of testing
 - c) Incomplete code
 - d) Bugs and memory leaks
44. **What is the role of the app versioning system?** []
- a) Ensure data is synchronized across devices
 - b) Track changes and improvements to the app
 - c) Store user data securely
 - d) Manage the app's user interface
45. **What is the best practice for handling app crashes in production?** []
- a) Ignore crashes
 - b) Collect crash logs and fix bugs
 - c) Disable new features
 - d) Stop app updates
46. **Which tool is commonly used for submitting Android apps to Google Play Store?** []
- a) Android Studio
 - b) Xcode
 - c) Firebase
 - d) Play Console

47. What does a "beta" release typically refer to? []
- a) Final app release
 - b) A pre-release version for testing purposes
 - c) A version with no features
 - d) A version for non-registered developers
48. Which of the following is important when preparing an app for submission? []
- a) Design a launch screen
 - b) Write a detailed app description
 - c) Test on various devices
 - d) All of the above
49. Which of the following is typically required for submitting an app to the app store? []
- a) App icon
 - b) Developer certificate
 - c) App screenshots
 - d) All of the above
50. Which is an important consideration when maintaining a mobile app after launch? []
- a) Handling new OS updates
 - b) Ignoring user reviews
 - c) Stopping marketing efforts
 - d) Removing app features frequently



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1.2.1. Certificate/Value Added Courses

Question Paper

34. Certificate Program on Cloud Computing and DevOPS


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC203	Certificate Program on Cloud Computing and DevOps		Max Marks:50	Time: 1 Hr

Date :20.11.2020


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:


1. **What does SaaS stand for?** []
a) System as a Service
b) Software as a Service
c) Solution as a Service
d) Server as a Service
2. **Which cloud deployment model provides exclusive access to a single Organization?** []
a) Public Cloud
b) Private Cloud
c) Hybrid Cloud
d) Community Cloud
3. **What is a key feature of cloud computing?** []
a) Fixed capacity
b) Scalability
c) Expensive infrastructure
d) Limited availability
4. **Which of the following is NOT a major cloud provider?** []
a) AWS
b) Azure
c) Google Cloud Platform
d) Docker
5. **Which cloud provider offers the service "EC2"?** []
a) AWS
b) Azure
c) GCP
d) IBM Cloud
6. **What is the primary focus of Azure's "Logic Apps"?** []
a) Virtual Machines
b) Serverless Workflow Automation
c) Storage Services
d) Monitoring


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7. **What is a primary benefit of designing scalable systems?** []
a) Reduced costs
b) Enhanced availability during high demand
c) Simplified coding
d) Fixed performance levels
8. **Which of the following is a security consideration in cloud architectures?** []
a) Automating all tasks
b) Encrypting data in transit and at rest
c) Using only public cloud models
d) Avoiding monitoring tools
9. **What is the primary goal of resilient systems in the cloud?** []
a) Minimized downtime
b) Reduced costs
c) Increased latency
d) Limited access
10. **What does provisioning cloud resources mean?** []
a) Creating virtual resources on demand
b) Manually deploying servers
c) Outsourcing IT infrastructure
d) Disabling unused resources
11. **Which service helps monitor cloud resources?** []
a) AWS CloudWatch
b) Azure Blob Storage
c) GCP BigQuery
d) Docker Swarm
12. **What is an example of deploying applications in the cloud?** []
a) Hosting a website on AWS S3
b) Running a local server
c) Building a static HTML page
d) Purchasing physical servers
13. **What does the DevOps lifecycle primarily emphasize?** []
a) Individual contribution
b) Continuous integration and delivery
c) Sporadic updates
d) Manual deployments
14. **What is the core principle of DevOps?** []
a) Separation between development and operations
b) Collaboration between teams
c) Manual testing processes
d) Isolated work environments
15. **Which tool is commonly used for continuous integration?** []
a) Jenkins
b) WordPress
c) Docker
d) MongoDB



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16. What is Terraform primarily used for? []
a) Managing code repositories
b) Infrastructure as Code (IaC)
c) Monitoring cloud resources
d) Application testing
17. Which tool is NOT used for automation? []
a) Chef
b) Puppet
c) Jenkins
d) PostgreSQL
18. What is the goal of configuration management? []
a) Maintaining consistent settings across resources
b) Building scalable systems
c) Developing user interfaces
d) Increasing latency
19. What is the primary purpose of a CI/CD pipeline? []
a) Manual deployments
b) Automating build, test, and deployment processes
c) Developing user interfaces
d) Analyzing system logs
20. Which of the following is a CI/CD tool? []
a) Jenkins
b) Tableau
c) Ansible
d) Terraform
21. What does "continuous delivery" mean in CI/CD? []
a) Delivering updates manually
b) Delivering updates automatically with minimal user intervention
c) Delivering once a year
d) Disabling automatic updates
22. What is the primary purpose of monitoring cloud resources? []
a) Increasing latency
b) Ensuring optimal performance and uptime
c) Reducing costs only
d) Limiting resource usage
23. Which AWS service is used for logging? []
a) CloudTrail
b) S3
c) EC2
d) Lambda
24. Which of the following tools can be used for monitoring applications? []
a) Prometheus
b) Ansible
c) Terraform
d) Git

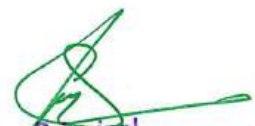

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25. What is the role of alerting in monitoring? []
a) Disabling unused features
b) Notifying teams about potential issues
c) Archiving logs
d) Encrypting data
26. Which metric indicates the health of a cloud resource? []
a) Latency
b) Uptime percentage
c) Error rate
d) All of the above
27. What is the primary goal of cloud security? []
a) Prevent unauthorized access
b) Increase costs
c) Decrease scalability
d) Delay deployments
28. What does IAM stand for in cloud security? []
a) Infrastructure and Access Management
b) Identity and Access Management
c) Integrated Application Model
d) Instance Access Model
29. Which is a common compliance standard in the cloud? []
a) ISO 27001
b) CSS
c) HTML
d) IoT
30. Which is NOT a security best practice? []
a) Encrypting data
b) Implementing strong access controls
c) Using outdated software
d) Regularly auditing systems
31. What is a benefit of compliance in the cloud? []
a) Legal protection and data safety
b) Reduced system uptime
c) Increased errors
d) Slower deployments
32. What is the purpose of analyzing real-world implementations in cloud computing? []
a) Understanding practical challenges and solutions
b) Learning unrelated technologies
c) Avoiding cloud-based solutions
d) Disabling scalability
33. In a group project, which phase involves finalizing the cloud architecture? []
a) Planning phase
b) Deployment phase
c) Testing phase
d) Design phase

34. What is a key deliverable of a cloud-based group project? []
a) Presentation and review of the solution
b) Deployment without testing
c) Code without documentation
d) Unused infrastructure
35. Which scenario is an example of hybrid cloud deployment? []
a) Combining on-premises and public cloud solutions
b) Using only AWS resources
c) Running a personal website
d) Hosting only in a private cloud
36. Which service is commonly used in case studies for big data processing? []
a) AWS EMR
b) Azure Blob Storage
c) GCP Compute Engine
d) Terraform
37. What is the full form of IaaS? []
a) Infrastructure as a Service
b) Internet as a Service
c) Integration as a Service
d) Information as a Service
38. Which deployment model involves combining public and private clouds? []
a) Public Cloud
b) Private Cloud
c) Hybrid Cloud
d) Community Cloud
39. Which DevOps tool is used for Infrastructure as Code? []
a) Terraform
b) Docker
c) Jenkins
d) MongoDB
40. Which AWS service is commonly used for monitoring and logging? []
a) CloudWatch
b) Lambda
c) RDS
d) DynamoDB
41. What does CI in CI/CD stand for? []
a) Continuous Integration
b) Cloud Integration
c) Cloud Infrastructure
d) Code Implementation
42. Which of the following is a containerization tool? []
a) Docker
b) Jenkins
c) Prometheus
d) Puppet


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43. What is a major benefit of IaC? []
a) Simplifies manual configuration
b) Standardizes and automates resource management
c) Prevents automation
d) Limits scalability
44. What is a key challenge of cloud adoption? []
a) Security and compliance
b) Faster deployments
c) Reduced costs
d) Enhanced uptime
45. What is one feature of SaaS? []
a) Software is hosted and maintained by the provider
b) Users manage the infrastructure
c) High capital investment
d) Limited availability
46. Which tool helps manage CI/CD pipelines? []
a) Jenkins
b) Terraform
c) Ansible
d) Kubernetes
47. What is the purpose of alerting systems in monitoring? []
a) Proactively notify about potential issues
b) Archive unused data
c) Increase latency
d) Disable security
48. Which feature is common to all major cloud providers? []
a) Virtual Machines
b) High-level programming languages
c) Custom hardware design
d) Exclusive access to services
49. Which practice improves DevOps collaboration? []
a) Continuous feedback
b) Isolated teams
c) Manual updates
d) Avoiding automation
50. What is the role of automation in DevOps? []
a) Streamlining repetitive tasks and reducing errors
b) Limiting resource provisioning
c) Increasing manual intervention
d) Preventing scalability



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1.2.1. Certificate/Value Added Courses

Question Paper

35. Bridge Course on Fundamentals of Statistics

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	BMB101	Bridge Course on Fundamentals of Statistics	Max Marks:50	Time: 1 Hr	

Date :20.11.2020

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What is the primary goal of statistics?** []
 - a) To manipulate data
 - b) To collect, analyze, and interpret data
 - c) To make data visualizations
 - d) To predict future events
2. **Which of the following is qualitative data?** []
 - a) Age of students
 - b) Gender of participants
 - c) Height of basketball players
 - d) Exam scores
3. **Which level of measurement is associated with ordered categories with no meaningful difference between values?** []
 - a) Nominal
 - b) Ordinal
 - c) Interval
 - d) Ratio
4. **The temperature in Celsius is an example of which level of measurement?** []
 - a) Nominal
 - b) Ordinal
 - c) Interval
 - d) Ratio
5. **Which of the following is NOT a scope of statistics?** []
 - a) Decision-making
 - b) Data collection
 - c) Infinite certainty
 - d) Trend analysis


6. **What is the arithmetic average of a dataset called?** []
a) Mode
b) Mean
c) Median
d) Range
7. **What measure divides the dataset into two equal parts?** []
a) Mean
b) Mode
c) Median
d) Standard deviation
8. **Which measure of dispersion represents the difference between the maximum and minimum values?** []
a) Variance
b) Range
c) Standard deviation
d) Interquartile range
9. **What graphical representation is most suitable for categorical data?** []
a) Histogram
b) Scatter plot
c) Bar chart
d) Box plot
10. **A box plot is primarily used to display:** []
a) Frequency distributions
b) Measures of central tendency
c) Data spread and outliers
d) Probabilities
11. **What is the set of all possible outcomes of a random experiment?** []
a) Event
b) Trial
c) Probability space
d) Sample space
12. **If two events cannot occur simultaneously, they are said to be:** []
a) Independent
b) Mutually exclusive
c) Complementary
d) Certain
13. **The probability of an event happening is always between:** []
a) 0 and 10
b) -1 and 1
c) 0 and 1
d) None of the above

14. What is the probability of flipping a coin and getting heads or tails? []
- a) 0.25
 - b) 0.5
 - c) 2.0
 - d) 1.0
15. Which rule applies to finding the probability of two independent events happening together? []
- a) Addition rule
 - b) Complement rule
 - c) Multiplication rule
 - d) Bayes' theorem
16. Which of the following is a discrete probability distribution? []
- a) Normal distribution
 - b) Binomial distribution
 - c) Exponential distribution
 - d) Chi-square distribution
17. A normal distribution is symmetric around its: []
- a) Median
 - b) Mode
 - c) Mean
 - d) All of the above
18. The probability of success in a binomial distribution is denoted by: []
- a) p
 - b) q
 - c) n
 - d) $1 - p$
19. What shape does the normal distribution curve have? []
- a) Rectangular
 - b) Triangular
 - c) Skewed
 - d) Bell-shaped
20. Which property is true for a normal distribution? []
- a) It is skewed right
 - b) The mean, median, and mode are equal
 - c) It is defined only for positive values
 - d) It has no variance
21. Which sampling method ensures every member of the population has an equal chance of being selected? []
- a) Stratified sampling
 - b) Cluster sampling
 - c) Random sampling
 - d) Convenience sampling


22. The Central Limit Theorem states that the sampling distribution of the sample mean: []
- a) Is always uniform
 - b) Is normally distributed for a large sample size
 - c) Is skewed
 - d) Is binomial
23. Which sampling method divides the population into groups and randomly selects entire groups? []
- a) Random sampling
 - b) Stratified sampling
 - c) Cluster sampling
 - d) Systematic sampling
24. A statistic calculated from a sample is called: []
- a) Parameter
 - b) Estimator
 - c) Population metric
 - d) Confidence interval
25. What is the purpose of sampling? []
- a) To avoid data collection
 - b) To manipulate data
 - c) To reduce biases completely
 - d) To study a part to infer about the whole
26. The null hypothesis (H_0) typically states: []
- a) A significant relationship exists
 - b) There is no effect or difference
 - c) Data is skewed
 - d) Results are inconclusive
27. A Type I error occurs when: []
- a) The null hypothesis is true but rejected
 - b) The null hypothesis is false but accepted
 - c) The alternative hypothesis is rejected
 - d) The p-value is large
28. What does ANOVA test for? []
- a) Differences in proportions
 - b) Differences between multiple means
 - c) Relationships between variables
 - d) Equality of medians
29. A chi-square test is used to analyze: []
- a) Means of two groups
 - b) Variances
 - c) Continuous data
 - d) Categorical data

30. The significance level (alpha) is usually set at: []
a) 0.1
b) 0.05
c) 0.01
d) 1.0
31. A Pearson correlation coefficient of 0 indicates: []
a) Perfect positive correlation
b) Weak correlation
c) Perfect negative correlation
d) No correlation
32. The dependent variable in regression analysis is also called: []
a) Predictor variable
b) Outcome variable
c) Independent variable
d) Covariate
33. In multiple regression, the number of predictors is: []
a) One
b) Two
c) More than one
d) Any number
34. The slope in a simple linear regression represents: []
a) The y-intercept
b) Change in the dependent variable per unit change in the independent variable
c) The correlation coefficient
d) The standard error
35. The correlation coefficient ranges between: []
a) -2 to 2
b) 0 to 1
c) -1 to 1
d) -0.5 to 0.5
36. Which software is specifically designed for statistical analysis? []
a) Excel
b) PowerPoint
c) Photoshop
d) SPSS
37. What is the first step when working with data in software? []
a) Visualizing the data
b) Importing and cleaning the data
c) Performing hypothesis testing
d) Creating complex models

38. Which software is open-source and widely used for statistical Programming? []
- a) R
 - b) SPSS
 - c) SAS
 - d) Minitab
39. In Excel, which function calculates the mean? []
- a) =MEAN()
 - b) =MEDIAN()
 - c) =MODE()
 - d) =AVERAGE()
40. Which plot is easily created in most statistical software? []
- a) Geographic maps
 - b) Box plot
 - c) 3D scatter plot
 - d) Flowchart
41. Case studies in statistics often involve: []
- a) Large theoretical data
 - b) Hypothetical scenarios
 - c) Real-world data analysis
 - d) Unrealistic assumptions
42. The first step in analyzing real-world data is: []
- a) Visualization
 - b) Cleaning and preparation
 - c) Hypothesis testing
 - d) Regression analysis
43. Statistical reports should always include: []
- a) Raw data only
 - b) Only graphs
 - c) Software commands
 - d) Interpretation of results
44. In a case study, hypothesis testing is used to: []
- a) Confirm or reject assumptions
 - b) Clean data
 - c) Perform advanced modeling
 - d) Find missing data
45. Statistical methods help in decision-making by: []
- a) Eliminating all risks
 - b) Providing evidence-based insights
 - c) Reducing computation time
 - d) Predicting with certainty


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46. **Advanced topics in statistics include:** []
- a) Bayesian analysis
 - b) Mean calculation
 - c) Bar chart creation
 - d) Sampling methods
47. **Reviewing key concepts ensures:** []
- a) Mastery of advanced topics
 - b) Better application of statistical methods
 - c) Avoiding software usage
 - d) Fewer errors in graphs
48. **Future directions in statistics often involve:** []
- a) Traditional methods only
 - b) Avoiding new technologies
 - c) Big data and machine learning
 - d) Focusing solely on descriptive statistics
49. **Recap sessions are useful for:** []
- a) Learning completely new material
 - b) Reinforcing previously learned concepts
 - c) Avoiding practical applications
 - d) Memorizing software commands
50. **Which is a key feature of modern statistical advancements?** []
- a) Decline in data importance
 - b) Reducing computational power
 - c) Focus only on theory
 - d) Integration with artificial intelligence



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1.2.1. Certificate/Value Added Courses

Question Paper

36. Bridge Course on Fundamentals of Programming


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	BMC101	Bridge Course on Fundamentals of Programming		Max Marks:50	Time: 1 Hr

Date :11.12.2020


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:


1. **Which of the following is a high-level programming language?** []
a) Assembly
b) Machine Code
c) Binary
d) Python
2. **What does syntax in programming refer to?** []
a) The order of hardware components
b) The design of an operating system
c) The set of rules defining how programs are written
d) The performance of the program
3. **Which step is essential before writing code?** []
a) Buying hardware
b) Setting up a programming environment
c) Learning to use spreadsheets
d) Learning advanced algorithms
4. **Which of these is a primitive data type?** []
a) Object
b) Dictionary
c) Array
d) Integer
5. **What is the purpose of type casting?** []
a) To convert one data type into another
b) To protect data in memory
c) To debug code efficiently
d) To write comments in the program


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6. **What symbol is used to declare a constant in most programming languages?** []
a) @
b) \$
c) const
d) var
7. **Which of the following is an arithmetic operator?** []
a) ==
b) &&
c) +
d) ||
8. **What is the result of the expression $5 + 2 * 3$ in most programming languages?** []
a) 11
b) 21
c) 15
d) 7
9. **Logical operators are used for:** []
a) Combining multiple conditions
b) Calculating numeric values
c) Converting data types
d) Debugging programs
10. **Which keyword is used for a conditional statement?** []
a) case
b) loop
c) repeat
d) if
11. **What is the purpose of a for loop?** []
a) To execute a block once
b) To repeat a block a fixed number of times
c) To terminate a program
d) To handle exceptions
12. **What is an example of a nested control structure?** []
a) A loop inside a variable
b) Declaring functions inside a loop
c) An if statement inside a loop
d) Using relational operators
13. **What does a function return by default if no return value is specified?** []
a) 0
b) -1
c) null
d) void

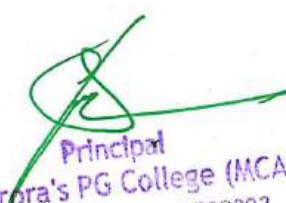

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14. **What is the scope of a variable declared inside a function?** []
- a) Global
 - b) Local
 - c) Static
 - d) Dynamic
15. **Which keyword is used to define a function?** []
- a) let
 - b) loop
 - c) def
 - d) var
16. **An array is:** []
- a) A collection of elements stored at contiguous memory locations
 - b) A single variable
 - c) An unorganized collection of data
 - d) A file system
17. **What is a characteristic of a multi-dimensional array?** []
- a) It contains only strings
 - b) It is faster than single-dimensional arrays
 - c) It uses rows and columns
 - d) It must have exactly two dimensions
18. **Which of the following is not a data structure?** []
- a) String
 - b) List
 - c) Array
 - d) Condition
19. **What is a runtime error?** []
- a) An error in the operating system
 - b) An error that occurs while the program is executing
 - c) An error in variable declaration
 - d) An error before compilation
20. **What is the purpose of a debugger?** []
- a) Writing new code
 - b) Generating reports
 - c) Enhancing application design
 - d) Identifying and fixing errors
21. **Which statement is used to handle exceptions?** []
- a) try-catch
 - b) try-except
 - c) debug-continue
 - d) loop-handle

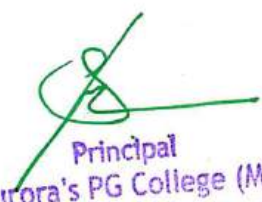

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22. **What is the key feature of an algorithm?** []
- a) Complex design
 - b) Random execution
 - c) A clear set of instructions
 - d) Unlimited steps
23. **Which sorting algorithm is based on repeatedly swapping adjacent elements?** []
- a) Merge Sort
 - b) Bubble Sort
 - c) Quick Sort
 - d) Binary Sort
24. **What is the time complexity of a linear search?** []
- a) $O(1)$
 - b) $O(n^2)$
 - c) $O(\log n)$
 - d) $O(n)$
25. **What is the primary purpose of project work in programming?** []
- a) To apply learned concepts
 - b) To improve operating systems
 - c) To learn new programming languages
 - d) To copy existing solutions
26. **How should a project presentation ideally end?** []
- a) With code debugging
 - b) With unanswered questions
 - c) With a discussion of solutions
 - d) By rewriting code
27. **Integrating programming constructs refers to:** []
- a) Combining loops, functions, and structures
 - b) Developing hardware
 - c) Writing standalone instructions
 - d) Avoiding debugging
28. **Reviewing concepts is important for:** []
- a) Learning new programming languages
 - b) Debugging errors
 - c) Ensuring foundational understanding
 - d) Avoiding algorithm implementation
29. **What is an example of an advanced topic?** []
- a) Conditional statements
 - b) Machine Learning
 - c) Arithmetic operators
 - d) Debugging tools


30. **Where can a programmer find resources for further learning?** []
- a) Only in textbooks
 - b) From outdated libraries
 - c) Online courses and documentation
 - d) From hardware specifications
31. **Which is not a programming paradigm?** []
- a) Object-oriented
 - b) Procedural
 - c) Functional
 - d) Algorithmic
32. **What is an IDE in programming?** []
- a) Integrated Development Environment
 - b) Internal Debugging Extension
 - c) Interactive Data Executor
 - d) Input Design Editor
33. **A variable that cannot change during the execution of a program is:** []
- a) Static
 - b) Constant
 - c) Global
 - d) Dynamic
34. **What will the following code output? `print(type(3.14))` (in Python)** []
- a) `<class 'int'>`
 - b) `<class 'str'>`
 - c) `<class 'float'>`
 - d) `<class 'bool'>`
35. **Which of the following has the highest precedence in most programming languages?** []
- a) Logical operators
 - b) Relational operators
 - c) Arithmetic operators
 - d) Assignment operators
36. **What is the output of `8 % 3`?** []
- a) 2
 - b) 3
 - c) 1
 - d) 8
37. **The while loop is best used when:** []
- a) Iterations are fixed
 - b) The condition always evaluates to false
 - c) Iterations depend on a condition
 - d) Code should not be executed


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38. Which of these statements is valid in most programming languages? []
- a) if (x = 10)
 - b) if (x == 10)
 - c) if x := 10
 - d) if [x = 10]
39. A recursive function is one that: []
- a) Calls another function
 - b) Contains a loop
 - c) Calls itself
 - d) Returns multiple values
40. Which of the following is an invalid function name? []
- a) 2ndFunction
 - b) helper Function
 - c) calculate Sum
 - d) main function
41. Which of the following correctly initializes an array in C++? []
- a) int array = {1, 2, 3};
 - b) int array[] = {1, 2, 3};
 - c) int array[3] = {1, 2, 3};
 - d) array int[3] = {1, 2, 3};
42. How is a string typically represented in C? []
- a) A single character variable
 - b) A pointer
 - c) An integer array
 - d) A character array
43. Which type of error is detected during program execution? []
- a) Syntax error
 - b) Runtime error
 - c) Compilation error
 - d) Logical error
44. What is the purpose of a breakpoint in debugging? []
- a) To pause execution at a specific point
 - b) To improve the program speed
 - c) To terminate the program
 - d) To remove errors automatically
45. Which algorithm is based on divide-and-conquer? []
- a) Bubble Sort
 - b) Linear Search
 - c) Merge Sort
 - d) Selection Sort


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46. Which searching algorithm is efficient for sorted arrays? []
- a) Binary Search
 - b) Linear Search
 - c) Quick Search
 - d) Hash Search
47. When dividing tasks in a project, it is best to: []
- a) Work only on complex features first
 - b) Work without a plan
 - c) Break the project into manageable modules
 - d) Test only after completing the project
48. The key outcome of a programming project is: []
- a) A working program that meets requirements
 - b) Code written without comments
 - c) Using the latest tools
 - d) Completing it faster than planned
49. Which resource is best for advanced programming concepts? []
- a) Beginner tutorials
 - b) Official documentation and research papers
 - c) Random blog posts
 - d) Social media
50. Learning advanced topics like AI and machine learning requires a strong understanding of: []
- a) Debugging only
 - b) Random programming languages
 - c) Basic hardware components
 - d) Basic programming concepts and algorithms



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1.2.1. Certificate/Value Added Courses

Question Paper

37. Certificate Program on Enterprise Resource Planning

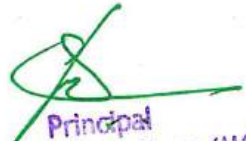
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB101	Certificate Program on Enterprise Resource Planning		Max Marks:50	Time: 1 Hr

Date :11.12.2020

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	


Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What does ERP stand for?** []
a) Enterprise Resource Planning
b) Enterprise Risk Planning
c) Enterprise Resource Process
d) Enterprise Routine Planning
2. **What is the primary importance of ERP systems?** []
a) To increase product prices
b) To integrate various business processes
c) To decrease customer satisfaction
d) To isolate data silos
3. **Which is NOT a key component of ERP systems?** []
a) Centralized database
b) Modular design
c) Decentralized architecture
d) Integration across functions
4. **Which module in ERP systems handles payroll and recruitment?** []
a) Finance
b) Human Resources
c) Supply Chain Management
d) Customer Relationship Management
5. **What is the main focus of the Finance module in ERP?** []
a) Inventory management
b) Budgeting and accounting
c) Employee scheduling
d) Marketing campaigns
6. **Supply Chain Management in ERP is primarily used for:** []
a) Customer engagement
b) Managing inventory and logistics
c) Payroll processing
d) Creating marketing strategies


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7. Which module is essential for maintaining customer relationships? []
a) Human Resources
b) Finance
c) Customer Relationship Management
d) Supply Chain Management
8. Which is the first phase of ERP implementation? []
a) Design
b) Deployment
c) Planning
d) Configuration
9. During the design phase, the focus is on: []
a) Developing the ERP system
b) Gathering requirements and creating a blueprint
c) Training employees
d) Evaluating vendor options
10. What is the primary goal of the deployment phase? []
a) Creating a system prototype
b) Configuring system settings
c) Making the system operational in the organization
d) Assessing system performance
11. ERP system integration ensures: []
a) Isolated functionality across departments
b) Seamless connectivity with existing IT infrastructure
c) Independent data storage
d) Manual data entry
12. Data migration in ERP involves: []
a) Backing up data on external servers
b) Transferring legacy data to the new ERP system
c) Deleting irrelevant data
d) None of the above
13. A key strategy for managing ERP data is: []
a) Manual data reconciliation
b) Real-time synchronization
c) Data duplication
d) Decentralized storage
14. Which is a critical factor when selecting an ERP vendor? []
a) Vendor popularity
b) Organizational needs and vendor compatibility
c) Cost alone
d) Lack of customer support
15. What should a comparative analysis of ERP systems include? []
a) User feedback and system capabilities
b) Historical success rate only
c) Marketing materials
d) None of the above

16. **Organizational resistance during ERP implementation can be minimized through:** []
- a) Ignoring user concerns
 - b) Transparent communication and training
 - c) Overloading employees
 - d) Avoiding system testing
17. **What is an essential part of user training?** []
- a) Leaving users to figure out the system
 - b) Providing hands-on experience with the ERP system
 - c) Limiting training sessions
 - d) Ignoring employee feedback
18. **Customization of ERP systems should focus on:** []
- a) Meeting specific organizational needs
 - b) Making the system more complex
 - c) Ignoring user requirements
 - d) Reducing system usability
19. **Best practices for ERP configuration include:** []
- a) Overloading the system with features
 - b) Aligning settings with organizational processes
 - c) Skipping documentation
 - d) Ignoring user feedback
20. **Which is an emerging trend in ERP systems?** []
- a) On-premise-only solutions
 - b) Cloud-based ERP systems
 - c) Limited scalability
 - d) Reduced automation
21. **AI integration in ERP systems enhances:** []
- a) Manual processes
 - b) Predictive analytics and decision-making
 - c) Data fragmentation
 - d) System downtime
22. **A KPI is used to:** []
- a) Identify key metrics to measure success
 - b) Increase data silos
 - c) Reduce accountability
 - d) None of the above
23. **ROI analysis helps in understanding:** []
- a) The financial value gained from the ERP investment
 - b) Employee satisfaction levels
 - c) System errors
 - d) None of the above
24. **A capstone project in ERP involves:** []
- a) Theoretical studies only
 - b) Practical planning and implementation of an ERP system
 - c) Ignoring project outcomes
 - d) Avoiding real-world scenarios



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25. **ERP systems primarily eliminate:** []
a) Real-time data access
b) Data silos and redundancy
c) Organizational flexibility
d) Automation in business processes
26. **What type of architecture is common in ERP systems?** []
a) Monolithic
b) Modular and scalable
c) Isolated
d) Disconnected
27. **Customer Relationship Management (CRM) in ERP systems focuses on:** []
a) Inventory tracking
b) Enhancing customer experience and retention
c) Payroll processing
d) Financial auditing
28. **The Human Resources module integrates which of the following?** []
a) Employee data management and performance tracking
b) Logistics and inventory systems
c) Sales and marketing automation
d) Financial reporting
29. **Which ERP module is essential for managing supply chain logistics?** []
a) Finance
b) Human Resources
c) Supply Chain Management
d) CRM
30. **What is the primary objective of the planning phase in ERP Implementation?** []
a) Monitoring system performance
b) Establishing project scope and goals
c) Conducting user training
d) Designing interfaces
31. **Configuration during ERP implementation involves:** []
a) Coding the ERP software
b) Setting parameters to align with business needs
c) Replacing hardware systems
d) Ignoring end-user feedback
32. **Which is a common challenge during ERP integration?** []
a) Increased data accuracy
b) Compatibility with legacy systems
c) Reduced system downtime
d) Increased user satisfaction
33. **Data synchronization in ERP ensures:** []
a) Data redundancy across departments
b) Real-time data consistency
c) Manual data updates
d) Data is stored in silos

34. **Vendor selection criteria should include:** []
a) Scalability and support services
b) Inflexible system designs
c) Absence of customization options
d) High costs without added value
35. **A comparative analysis between ERP solutions helps in:** []
a) Choosing the least expensive option
b) Understanding differences in features and compatibility
c) Ignoring business-specific needs
d) Avoiding stakeholder input
36. **Effective change management ensures:** []
a) Resistance from employees
b) Smooth adoption of the ERP system
c) Misalignment with business goals
d) Disengagement of end-users
37. **User support post-implementation focuses on:** []
a) Reducing user feedback
b) Resolving technical issues and continuous improvement
c) Ignoring user concerns
d) Limiting system functionality
38. **Over-customization of ERP systems can lead to:** []
a) Increased efficiency
b) Maintenance and upgrade challenges
c) Simplified processes
d) Better standardization
39. **Configuration involves:** []
a) Adapting the system without altering its source code
b) Completely rewriting the software
c) Ignoring existing business workflows
d) Reducing functionality
40. **IoT in ERP systems allows:** []
a) Manual data entry
b) Real-time monitoring of physical assets
c) Limited system connectivity
d) Reduced scalability
41. **Cloud-based ERP systems are advantageous because:** []
a) They are only suitable for large organizations
b) They provide scalability and remote access
c) They require heavy upfront infrastructure investments
d) They are difficult to integrate
42. **Key Performance Indicators (KPIs) in ERP measure:** []
a) User dissatisfaction
b) Business process efficiency and effectiveness
c) Increased data silos
d) System downtime


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43. **ROI analysis in ERP evaluation involves:** []
a) Analyzing the cost-benefit ratio of the system
b) Ignoring system costs
c) Focusing only on non-financial metrics
d) Disregarding performance improvements
44. **A capstone project in ERP requires:** []
a) A detailed implementation roadmap
b) Avoiding stakeholder input
c) Ignoring real-world application
d) Limited focus on results
45. **Real-world scenarios in a capstone project help in:** []
a) Avoiding practical challenges
b) Preparing for actual ERP implementation challenges
c) Reducing problem-solving skills
d) Simplifying user training requirements
46. **ERP implementation is considered successful when:** []
a) Organizational goals are aligned with system outputs
b) Only technical goals are met
c) Employee dissatisfaction increases
d) Business processes remain unchanged
47. **Training during ERP implementation is essential to:** []
a) Ensure system downtime
b) Facilitate user adoption and reduce errors
c) Ignore user feedback
d) Overcomplicate workflows
48. **Future ERP systems will likely include:** []
a) Manual reporting tools
b) AI-driven analytics and automation
c) Reduced connectivity
d) Standalone modules
49. **Effective data management in ERP systems involves:** []
a) Fragmenting data storage
b) Consolidating and maintaining data accuracy
c) Eliminating real-time updates
d) Avoiding integration
50. **ERP systems benefit organizations by:** []
a) Streamlining operations and providing centralized data
b) Isolating departments
c) Limiting data access
d) Increasing operational inefficiencies



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1.2.1. Certificate/Value Added Courses

Question Paper

38. Certificate Program on Augmented Reality and Virtual Reality

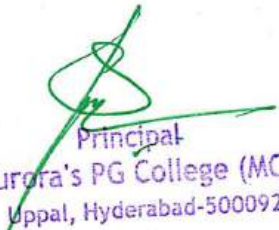
College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC101	Certificate Program on Augmented Reality (AR) and Virtual Reality (VR)		Max Marks:50	Time: 1 Hr

Date :27.03.2021

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	


**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

1. **What does AR stand for?** []
a) Augmented Reality
b) Alternative Reality
c) Artificial Reality
d) Amplified Reality
2. **Which of the following best describes VR?** []
a) A real-world enhancement with virtual objects
b) A fully immersive virtual environment
c) A mix of real and digital content
d) A form of 3D printing
3. **Which was one of the first technologies to contribute to VR development? []**
a) Sensorama
b) Google Glass
c) Oculus Rift
d) ARKit
4. **What is one key similarity between AR and VR?** []
a) Both involve interactive digital environments
b) Both require complete isolation from the physical world
c) Both rely on GPS for functionality
d) Both are used exclusively for gaming
5. **What is a common application of AR?** []
a) Virtual simulations for pilots
b) Interactive overlays on real-world objects
c) Completely immersive gaming
d) Virtual reality tourism
6. **Which of these is not AR hardware?** []
a) VR headset
b) Smart glasses
c) Smartphone
d) Tablet


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7. **What is a key function of tracking systems in VR?** []
a) Monitoring user movements in 3D space
b) Enhancing GPS accuracy
c) Improving voice recognition
d) Synchronizing audio and video
8. **Which sensor is crucial for AR applications?** []
a) Microphone
b) Camera
c) Speaker
d) Keyboard
9. **What distinguishes VR hardware from AR hardware?** []
a) Use of cameras
b) Isolation from the physical environment
c) Compatibility with smartphones
d) Inclusion of haptic feedback
10. **Which of the following is a feature of AR smart glasses?** []
a) Fully immersive displays
b) Overlaying digital information on the real world
c) Gaming-focused design
d) High-end audio capabilities
11. **Which platform is primarily used for AR development on iOS devices?** []
a) Unity
b) ARKit
c) Unreal Engine
d) ARCore
12. **Which development tool is widely used for both AR and VR?** []
a) Blender
b) Unity
c) Photoshop
d) GitHub
13. **ARCore is associated with which operating system?** []
a) iOS
b) Android
c) Windows
d) Linux
14. **What is a critical skill for AR and VR developers?** []
a) Video editing
b) Programming
c) Spreadsheet analysis
d) Networking
15. **What is a benefit of using development platforms like Unity for VR?** []
a) Cross-platform compatibility
b) Exclusive support for AR applications
c) No coding required
d) Built-in hardware tracking

16. **What is a key principle of UX/UI design for AR and VR?** []
a) Usability and immersion
b) Bright colors and animations
c) Maximum realism in design
d) Advanced typography
17. **What is an important interaction model in AR?** []
a) Gesture recognition
b) Voice-to-text conversion
c) Gamepad inputs
d) Real-time scripting
18. **Which of the following is an accessibility consideration in AR/VR?** []
a) System compatibility
b) Designing for color blindness
c) Increased frame rates
d) Multi-language support
19. **What is one way to enhance user immersion in VR?** []
a) Realistic audio design
b) Limited user movement
c) Static imagery
d) Fast data processing
20. **AR applications often require careful consideration of:** []
a) Physical isolation
b) Real-world environments
c) Hardware durability
d) Battery efficiency
21. **ARKit is used for:** []
a) Developing VR applications
b) Developing AR applications for iOS
c) Creating 3D models
d) Rendering video games
22. **ARCore is primarily supported on:** []
a) iOS devices
b) Windows PCs
c) Android devices
d) Standalone VR systems
23. **A common framework for AR development is:** []
a) Vuforia
b) Blender
c) DaVinci Resolve
d) Premiere Pro
24. **Which is an effective approach to testing AR applications?** []
a) Using emulators exclusively
b) Relying on user reviews
c) Real-world testing on target devices
d) Testing only in a lab environment

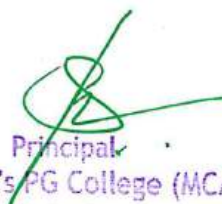

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25. **What is the primary goal of AR development?** []
a) Blending digital elements with real-world environments
b) Isolating users in a virtual world
c) Optimizing performance for VR devices
d) Enabling remote collaboration
26. **Unity and Unreal Engine are tools for:** []
a) Designing AR glasses
b) Creating VR environments
c) Enhancing web browsers
d) Improving network security
27. **Which feature is unique to VR development?** []
a) Interaction with physical objects
b) Touchscreen input reliance
c) Augmented overlays
d) Fully immersive 3D spaces
28. **A case study for VR could include:** []
a) Live GPS tracking
b) Virtual training simulations
c) Mobile app interfaces
d) Drone navigation
29. **Which of the following is critical for VR applications?** []
a) Low latency
b) High frame rates
c) Minimal user interaction
d) Small file sizes
30. **Unreal Engine is known for:** []
a) High-quality rendering in VR
b) AR development for Android
c) Cloud-based VR hosting
d) User-friendly AR prototyping
31. **What is essential for 3D modeling in AR/VR?** []
a) High-resolution textures
b) Complex coding skills
c) Standardized hardware
d) Simplistic animations
32. **Texturing is important for:** []
a) Programming interactions
b) Enhancing the realism of objects
c) Reducing application size
d) Building user interfaces
33. **Spatial sound design helps in:** []
a) Increasing immersion
b) Boosting audio quality
c) Simplifying audio implementation
d) Enhancing user interactivity

34. Which tool is commonly used for 3D modeling? []
a) Unity
b) ARKit
c) Blender
d) Unreal Engine
35. Lighting in AR/VR applications affects: []
a) Sound propagation
b) Visual depth and realism
c) Device compatibility
d) Coding complexity
36. Which industry is seeing significant adoption of AR technology for training? []
a) Healthcare
b) Retail
c) Entertainment
d) Agriculture
37. One of the most common applications of VR in healthcare is: []
a) Virtual shopping experiences
b) Digital art creation
c) Virtual fitness coaching
d) Medical training and simulations
38. Which AR application has been widely used in the retail industry? []
a) Virtual fitting rooms
b) Virtual reality theme parks
c) Driverless car navigation
d) Online product modeling
39. What type of VR application is popular in the entertainment industry? []
a) Online retail experiences
b) Real-time weather forecasting
c) Virtual interior design
d) Immersive video games
40. In education, VR is often used for: []
a) Virtual field trips
b) Product advertising
c) Social media marketing
d) Digital art galleries
41. A common technical challenge in AR and VR is: []
a) Low storage requirements
b) Latency and hardware limitations
c) Overreliance on GPS
d) High resolution requirements
42. AR and VR applications must address privacy concerns related to: []
a) User data collection
b) Brightness settings
c) Audio fidelity
d) Frame rates


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43. **What is an ethical issue associated with VR experiences?** []
- a) Limited user customization
 - b) Slow rendering speeds
 - c) Potential for addiction and escapism
 - d) Lack of accessibility
44. **To address ethical dilemmas in AR and VR, developers should:** []
- a) Focus on maximizing entertainment value
 - b) Prioritize user consent and transparency
 - c) Avoid integrating new technologies
 - d) Rely on automation for decision-making
45. **Which of the following is a potential societal impact of AR?** []
- a) Changes in social interactions
 - b) Decreased screen time for children
 - c) Reduced privacy concerns
 - d) Diminished hardware costs
46. **What emerging technology could enhance AR/VR experiences?** []
- a) Virtual assistants
 - b) Haptic feedback
 - c) Static imagery
 - d) Enhanced web browsing
47. **The integration of AI in AR and VR can lead to:** []
- a) More personalized and adaptive experiences
 - b) Less interactive content
 - c) Reduced content quality
 - d) Slower processing speeds
48. **The future of AR/VR will likely include:** []
- a) Mixed Reality applications
 - b) Complete reliance on traditional interfaces
 - c) A shift away from 3D environments
 - d) The decline of mobile platforms
49. **A key part of the capstone project in AR/VR courses involves:** []
- a) Researching market trends
 - b) Designing and developing a complete application
 - c) Analyzing hardware specifications
 - d) Exploring competitor products
50. **What career opportunity is most likely to emerge as AR/VR technologies Advance?** []
- a) AR/VR experience designer
 - b) Data entry clerk
 - c) Cloud infrastructure manager
 - d) Software packaging expert



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1.2.1. Certificate/Value Added Courses

Question Paper

39. Certificate Program on Leadership in the Digital Age

College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB203	Certificate Program on Leadership Digital Age	Max Marks:50	Time: 1 Hr	

Date : 31.10.2019

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	


Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What is the primary focus of digital leadership?** []
a) Managing technical teams
b) Utilizing digital tools and technologies to lead
c) Creating digital products
d) Designing digital marketing strategies
2. **Which of the following is an essential characteristic of a digital leader?** []
a) Ability to control resources
b) High technical expertise in coding
c) Adaptability and continuous learning
d) Resistance to change
3. **What has digital transformation impacted the most in leadership roles?** []
a) Leadership styles and decision-making
b) Budget allocation
c) Employee salaries
d) Physical office spaces
4. **Which of the following is crucial for a digital leader in the 21st century?** []
a) Knowledge of traditional management techniques
b) Ability to create digital marketing strategies
c) Understanding how digital technology can drive business change
d) Knowledge of the past organizational structure
5. **What is digital transformation primarily concerned with?** []
a) Replacing traditional leadership styles with digital-only approaches
b) Integrating digital technologies to change how businesses operate
c) Increasing the number of employees in a company
d) Limiting the use of technology in decision-making
6. **Which of the following is an example of a company that underwent successful digital transformation?** []
a) Kodak
b) Blockbuster
c) Netflix
d) Sears

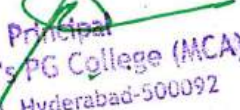
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7. **What role does technology play in digital transformation?** []
a) It replaces human decision-making
b) It automates all tasks within an organization
c) It drives organizational change and enables new business models
d) It reduces the need for collaboration
8. **Which of these is a key element of successful digital transformation?** []
a) Keeping all traditional business processes intact
b) Focusing solely on employee training
c) Investing in the latest digital technologies without strategy
d) Aligning technology with business goals and culture
9. **Which skill is considered core for digital leaders?** []
a) Public speaking
b) Emotional intelligence
c) Coding proficiency
d) Financial analysis
10. **How can digital leaders develop a digital mindset?** []
a) By resisting new technologies
b) By maintaining a fixed approach to problem-solving
c) By embracing continuous learning and technological advancements
d) By avoiding digital tools and platforms
11. **What is the most important strategy for continuous learning in digital leadership?** []
a) Ignoring new technological trends
b) Participating in regular training and workshops
c) Focusing on a single technology at all times
d) Avoiding change and maintaining a static skill set
12. **Which competency is important for a digital leader to build?** []
a) Analytical thinking
b) Technical development
c) Communication in traditional formats
d) Reactive leadership
13. **Which of the following is an example of a digital collaboration tool?** []
a) Microsoft Teams
b) Google Calendar
c) Excel spreadsheets
d) Word processing software
14. **What is the primary benefit of using data analytics in leadership?** []
a) It automates decision-making
b) It provides insights for informed decisions
c) It makes leadership more hierarchical
d) It eliminates the need for human judgment
15. **Which of the following is a key practice when integrating digital tools into leadership?** []
a) Relying on traditional methods
b) Avoiding training employees on the tools
c) Ensuring tools are aligned with team needs and goals
d) Disregarding employee feedback

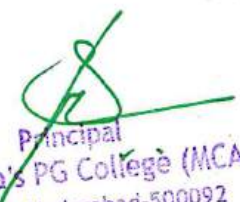
16. Which of these digital tools is used for project management? []
a) Slack
b) Zoom
c) Asana
d) QuickBooks
17. Which of the following can be used to enhance decision-making in a digital world? []
a) Data and analytics
b) Relying on intuition alone
c) Manual processes and documentation
d) Ignoring trends and consumer feedback
18. How can digital strategies provide a competitive advantage? []
a) By copying competitors' methods
b) By leveraging technology for faster and more efficient operations
c) By maintaining traditional business practices
d) By limiting technological integration
19. In the context of decision-making, what does "data-driven" mean? []
a) Making decisions based solely on intuition
b) Making decisions based on analytical insights derived from data
c) Relying on past experience and guesses
d) Ignoring customer feedback and preferences
20. Which of the following is an example of a data-driven decision? []
a) Using historical sales trends to forecast future product demand
b) Making a decision based on personal opinions
c) Asking employees for their subjective views on the company
d) Relying solely on gut feeling
21. What is one major challenge for leaders during digital disruption? []
a) Making all decisions manually
b) Managing employee resistance to change
c) Maintaining traditional business structures
d) Ignoring technology advancements
22. Which strategy can foster innovation in an organization? []
a) Strictly following old processes
b) Encouraging risk-taking and experimentation
c) Limiting employee feedback
d) Rejecting new ideas from employees
23. How can leaders overcome resistance to change? []
a) By making abrupt changes without any communication
b) By clearly communicating the benefits and vision of the change
c) By focusing only on short-term gains
d) By avoiding discussions about the change process
24. What is a key component of building a culture of innovation? []
a) Discouraging new ideas
b) Providing a safe space for failure and learning
c) Maintaining rigid policies and procedures
d) Ignoring feedback from teams


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25. **Which of the following is crucial for effective digital communication?** []
a) Ignoring feedback
b) Clarity, transparency, and regular updates
c) Using only emails for communication
d) Focusing only on face-to-face meetings
26. **Which digital tool is most commonly used for virtual meetings?** []
a) Google Sheets
b) Slack
c) Zoom
d) Trello
27. **What is a key benefit of remote and hybrid teams?** []
a) Lack of communication
b) Flexibility in work arrangements
c) Reduced productivity
d) Increased office space requirements
28. **Which of the following is essential for successful virtual collaboration?** []
a) Isolation from team members
b) Use of clear communication tools
c) Limited access to digital platforms
d) Fewer meetings
29. **Which of the following is an ethical concern in digital leadership?** []
a) Employee data privacy
b) Ignoring business performance
c) Focusing solely on profit
d) Limiting technology use
30. **What is digital governance focused on?** []
a) Controlling digital tools and technologies exclusively
b) Ensuring ethical and responsible use of technology and data
c) Ignoring regulations and policies
d) Maintaining traditional leadership models
31. **Which action can help ensure responsible digital governance?** []
a) Avoiding audits of digital platforms
b) Implementing strict data security policies
c) Limiting access to digital platforms
d) Ignoring regulatory standards
32. **Which of the following is a key issue in digital ethics?** []
a) Reducing employee engagement
b) Ensuring that data is handled responsibly
c) Limiting the use of technology for innovation
d) Creating an isolated work environment
33. **What is a major emerging trend in digital technology?** []
a) The rise of manual processes
b) Automation and artificial intelligence
c) The decline of mobile technologies
d) The return of traditional office work


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34. **How should digital leaders prepare for cybersecurity challenges?** []
a) By ignoring new threats
b) By investing in cybersecurity measures and training
c) By restricting all technology usage
d) By focusing only on data privacy
35. **What challenge does AI present to digital leadership?** []
a) The decline of automation tools
b) Difficulty in adopting traditional leadership models
c) Ensuring ethical use and avoiding biases
d) The loss of digital collaboration platforms
36. **How should digital leaders prepare for the future?** []
a) By ignoring emerging technologies
b) By focusing on future job cuts
c) By staying informed about trends and adapting strategies
d) By sticking to traditional leadership methods
37. **What is the goal of a capstone project in digital leadership?** []
a) To showcase knowledge by following traditional methods
b) To develop a digital leadership strategy for real-world scenarios
c) To prepare a traditional business plan
d) To avoid using digital tools
38. **What is one key aspect of reflecting on future trends in digital leadership?** []
a) Limiting digital tools to traditional methods
b) Understanding how emerging technologies will impact organizations
c) Avoiding change altogether
d) Discarding digital leadership strategies
39. **How can digital leaders benefit from ongoing career opportunities?** []
a) By focusing only on technical skills
b) By embracing innovation and continuous learning
c) By avoiding digital tools and trends
d) By resisting digital leadership roles
40. **What should a digital leadership strategy consider?** []
a) Only traditional leadership methods
b) The integration of technology and business goals
c) Ignoring data and analytics
d) Maintaining old structures without change
41. **What is a key aspect of digital leadership?** []
a) Focusing on operational efficiency alone
b) Driving change through the use of digital tools and innovative strategies
c) Limiting communication to in-person meetings
d) Encouraging resistance to digital technology
42. **Which of these is a potential challenge for digital leaders?** []
a) Managing data overload
b) Reducing employee engagement
c) Avoiding new technologies
d) Focusing on physical office spaces only


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43. **Digital leaders must balance which of the following?** []
a) Rigid policies with employee creativity
b) Financial performance with technological innovation
c) Traditional management styles with digital transformation
d) Only profits with long-term goals
44. **What is the relationship between digital transformation and business growth?** []
a) Digital transformation leads to slower decision-making
b) It allows businesses to become more flexible and competitive
c) It increases operational costs significantly
d) It restricts the adoption of new technologies
45. **Which technology is most commonly associated with digital transformation?** []
a) Cloud computing
b) Fax machines
c) Landline phones
d) Paper-based documentation
46. **Which industry has experienced significant digital transformation in recent Years?** []
a) Retail
b) Agriculture
c) Mining
d) Shipping
47. **Which of the following is crucial for digital leaders to develop?** []
a) A deep knowledge of all technical processes
b) A strong understanding of digital culture and behaviors
c) A rigid view of the future
d) A complete reliance on digital tools over human intuition
48. **Which mindset should digital leaders adopt to adapt to changing technologies?** []
a) Fixed mindset
b) Digital mindset
c) Traditional mindset
d) Narrow mindset
49. **To stay competitive in the digital age, leaders must focus on which of the following?** []
a) Continuously updating technology skills
b) Keeping their leadership style static
c) Minimizing use of digital platforms
d) Relying on old, proven techniques
50. **Which digital tool is typically used for social media management?** []
a) Slack
b) Hootsuite
c) Microsoft Teams
d) Asana



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1.2.1. Certificate/Value Added Courses

Question Paper

40. Certificate Program on Natural Language Processing


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC202	Certificate Program on Natural Language Processing		Max Marks:50	Time: 1 Hr

Date : 23.11.2019

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What does NLP stand for?** []
A. Natural Logic Processing
B. Neuro Linguistic Processing
C. Natural Language Processing
D. Neural Language Program
2. **Why is NLP significant?** []
A. To solve logical problems
B. To process only spoken data
C. To enable machines to understand and process human language
D. To create hardware devices
3. **When did NLP begin to emerge as a field?** []
A. 1950s
B. 1960s
C. 1980s
D. 2000s
4. **Which of the following is NOT an application of NLP?** []
A. Sentiment analysis
B. Machine translation
C. Image classification
D. Chatbots
5. **What is one key challenge in NLP?** []
A. Limited use cases
B. Ambiguity in human language
C. Lack of computational power
D. Simple algorithms

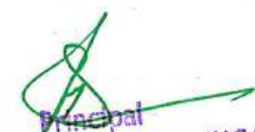

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6. **What is tokenization in NLP?** []
A. Compressing text data
B. Breaking text into smaller units like words or sentences
C. Translating text to numbers
D. Encoding text
7. **What does TF-IDF stand for?** []
A. Term Frequency - Initial Document Feature
B. Term Frequency - Inverse Document Frequency
C. Text Format - Integer Document Frequency
D. Token Format - Internal Data Frequency
8. **What is the goal of text normalization?** []
A. Generating embeddings
B. Converting text into a consistent format
C. Creating parsers
D. Summarizing text
9. **Which method is NOT used for text representation?** []
A. Bag-of-Words
B. Word Embeddings
C. Object-Oriented Mapping
D. TF-IDF
10. **Which library is widely used for text preprocessing in Python?** []
A. Pandas
B. Matplotlib
C. NLTK
D. OpenCV
11. **What does part-of-speech tagging do?** []
A. Assigns word categories like noun, verb, etc.
B. Detects entities in text
C. Translates text to another language
D. Summarizes text
12. **Which parsing technique uses grammatical rules to analyze sentences?** []
A. Deep Learning Parsing
B. Dependency Parsing
C. Sentiment Parsing
D. Token Parsing
13. **Which of the following is NOT a part of syntactic analysis?** []
A. Part-of-speech tagging
B. Parsing
C. Sentiment classification
D. Dependency trees
14. **What is the purpose of parsing in NLP?** []
A. Summarization
B. Understanding sentence structure
C. Tokenizing sentences
D. Detecting emotions

15. Which tool is often used for syntactic analysis? []
A. TensorFlow
B. spaCy
C. OpenCV
D. Seaborn
16. What does NER stand for? []
A. Name Extraction Recognition
B. New Entity Resolver
C. Named Entity Recognition
D. Numeric Extraction Rules
17. Which of the following is an example of word sense disambiguation? []
A. Detecting verbs
B. Distinguishing between 'bank' (river) and 'bank' (finance)
C. Extracting names
D. Tokenizing words
18. What does coreference resolution handle? []
A. Sentence parsing
B. Summarization
C. Finding references like pronouns and their entities
D. Translation
19. Which technique is central to semantic analysis? []
A. Word Embeddings
B. Understanding word meanings in context
C. Bag-of-Words
D. Tokenization
20. In NER, which entity would "New York" belong to? []
A. Date
B. Location
C. Organization
D. Person
21. What is sentiment analysis? []
A. Identifying part-of-speech tags
B. Determining the emotional tone in text
C. Parsing sentences
D. Detecting entities
22. Which algorithm is commonly used for text classification? []
A. K-Means
B. Naive Bayes
C. CNNs for Images
D. Regression
23. What is a key evaluation metric for classification tasks? []
A. RMSE
B. Accuracy
C. BLEU Score
D. Parsing Speed

24. **Which technique is used for feature extraction in sentiment analysis?** []
A. Clustering
B. Tokenization
C. TF-IDF
D. Coreference resolution
25. **Which Python library is popular for sentiment analysis?** []
A. Matplotlib
B. OpenCV
C. TextBlob
D. Pandas
26. **What is machine translation?** []
A. Automatic translation between languages
B. Summarizing large texts
C. Parsing syntax
D. Named entity recognition
27. **Which architecture is commonly used for sequence-to-sequence models?** []
A. CNN
B. Recurrent Neural Networks (RNNs)
C. Decision Trees
D. Linear Regression
28. **What is the goal of text summarization?** []
A. Translate text
B. Reduce text size while maintaining meaning
C. Detect entities
D. Tag parts of speech
29. **What is an example of machine translation?** []
A. Google Translate
B. Chatbots
C. NER models
D. Search engines
30. **Which deep learning model is widely used for text generation?** []
A. Naive Bayes
B. Transformer
C. Decision Trees
D. TF-IDF
31. **What does Word2Vec generate?** []
A. Word embeddings
B. Parsing rules
C. Text normalization
D. Entities
32. **What model introduced attention mechanisms?** []
A. RNNs
B. LSTMs
C. Transformers
D. Bag-of-Words

33. Which embedding method is pre-trained on large corpora? []
A. Bag-of-Words
B. GloVe
C. NLTK embeddings
D. Tokenizers
34. Transformers are best known for handling: []
A. Static data
B. Long-range dependencies in text
C. Image classification
D. Token parsing
35. What does "BERT" stand for? []
A. Bagged Embedding Real-time Transformer
B. Bidirectional Encoder Representations from Transformers
C. Basic Encoder Resultant Tree
D. Big Embedding Resource Tokenizer
36. Which library offers state-of-the-art transformer models? []
A. NLTK
B. Hugging Face Transformers
C. OpenCV
D. TensorFlow
37. Which library is often used for NLP pipelines? []
A. Pandas
B. spaCy
C. Matplotlib
D. Keras
38. What does NLTK stand for? []
A. National Linguistic Tokenizer Kit
B. Natural Language Toolkit
C. Neural Language Tree Kit
D. Named Logic Text Kernel
39. What is Hugging Face known for? []
A. Named Entity Recognition
B. Pre-trained NLP models
C. Syntax parsing
D. Translation APIs
40. Which NLP library is lightweight and production-ready? []
A. TensorFlow
B. spaCy
C. OpenCV
D. Matplotlib
41. Which application uses NLP for search ranking? []
A. Search engines
B. Machine translation
C. Chatbots
D. Entity recognition


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42. **What is the primary use of chatbots?** []
A. Text classification
B. Customer support automation
C. Word sense disambiguation
D. Part-of-speech tagging
43. **Which NLP technique improves virtual assistants like Alexa?** []
A. Parsing
B. Speech recognition and language understanding
C. Coreference resolution
D. Embedding generation
44. **What ethical issue arises in NLP?** []
A. High accuracy models
B. Bias in training data
C. Slow computations
D. Over-tokenization
45. **Which tool assists in real-world implementation of NLP?** []
A. NLTK
B. spaCy and Hugging Face
C. Matplotlib
D. SQL
46. **What is the purpose of a capstone project?** []
A. Testing theories
B. Applying NLP skills to real-world problems
C. Tokenizing words
D. Summarizing content
47. **Which of the following is a future NLP trend?** []
A. Basic TF-IDF models
B. Static embeddings
C. Multimodal NLP (text and images)
D. Grammar-based systems
48. **What skill is crucial for future NLP engineers?** []
A. Basic coding
B. Deep learning expertise
C. Image processing
D. Hardware assembly
49. **How does NLP benefit businesses?** []
A. Text formatting
B. Improving communication and insights
C. Tokenization only
D. Low cost hardware
50. **Which sector heavily relies on NLP for text summarization?** []
A. Gaming
B. News and media
C. Healthcare
D. Retail



1.2.1. Certificate/Value Added Courses

Question Paper

41. Training Program on Finance and Accounting


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	TMB201	Training Program on Finance and Accounting	Max Marks:50	Time: 1 Hr	

Date :23.11.2019

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	


Answer the following Multiple Choice Questions:
Each question carries equal marks:

- Which financial statement shows a company's financial position at a specific point in time?** []
 - Income Statement
 - Cash Flow Statement
 - Balance Sheet
 - Statement of Retained Earnings
- What does the Income Statement primarily show?** []
 - Assets and liabilities
 - Revenues and expenses
 - Cash inflows and outflows
 - Equity and dividends
- Which equation represents the Balance Sheet?** []
 - Revenues - Expenses = Net Income
 - Assets - Liabilities = Equity
 - Assets = Liabilities + Equity
 - Cash Inflows = Cash Outflows
- Depreciation is recorded as:** []
 - An expense on the Income Statement
 - A liability on the Balance Sheet
 - A cash outflow on the Cash Flow Statement
 - None of the above
- Which section of the Cash Flow Statement includes activities related to issuing shares or borrowing money?** []
 - Operating activities
 - Investing activities
 - Financing activities
 - Expense activities


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6. **What is the primary focus of managerial accounting?** []
a) Internal decision-making
b) External reporting
c) Tax compliance
d) Auditing
7. **A cost that remains constant per unit but changes in total is called:** []
a) Fixed cost
b) Variable cost
c) Mixed cost
d) Sunk cost
8. **Which budgeting method starts from zero and requires justification for all expenses?** []
a) Incremental budgeting
b) Zero-based budgeting
c) Flexible budgeting
d) Master budgeting
9. **Overhead costs are classified as:** []
a) Direct costs
b) Indirect costs
c) Variable costs
d) Fixed costs
10. **What is break-even analysis used for?** []
a) Calculating profit margins
b) Determining the sales volume needed to cover costs
c) Analyzing sunk costs
d) Allocating resources
11. **What does the current ratio measure?** []
a) Profitability
b) Liquidity
c) Leverage
d) Efficiency
12. **Which ratio is used to assess a company's ability to pay short-term Obligations?** []
a) Debt-to-equity ratio
b) Current ratio
c) Price-to-earnings ratio
d) Net profit margin
13. **What does a high inventory turnover ratio indicate?** []
a) Inefficient inventory management
b) Low sales volume
c) High sales efficiency
d) Excess inventory

14. Which of the following measures profitability? []
- a) Debt ratio
 - b) Return on equity
 - c) Quick ratio
 - d) Asset turnover ratio
15. The formula for gross profit margin is: []
- a) $(\text{Revenue} - \text{Cost of Goods Sold}) / \text{Revenue}$
 - b) $\text{Net Income} / \text{Revenue}$
 - c) $\text{Operating Income} / \text{Revenue}$
 - d) $\text{Total Assets} / \text{Revenue}$
16. Which of the following is a primary function of an AIS? []
- a) Tax filing
 - b) Recording, processing, and reporting financial data
 - c) Market research
 - d) Business strategy planning
17. A well-designed AIS should ensure: []
- a) Decreased transparency
 - b) Accurate and timely financial reporting
 - c) Increased manual processes
 - d) Reduced compliance with regulations
18. ERP systems are examples of: []
- a) Cost accounting tools
 - b) Integrated accounting information systems
 - c) Budgeting software
 - d) Manual ledgers
19. Which control is essential for preventing unauthorized access to AIS? []
- a) Access controls
 - b) Inventory controls
 - c) Tax compliance
 - d) Variance analysis
20. What is the first step in implementing an AIS? []
- a) Data migration
 - b) System testing
 - c) Requirements analysis
 - d) Financial forecasting
21. The goal of corporate finance is to: []
- a) Maximize sales
 - b) Maximize shareholder value
 - c) Minimize costs
 - d) Ensure tax compliance



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- 22. Which of the following involves evaluating long-term investments?** []
- a) Financial modeling
 - b) Capital budgeting
 - c) Cost accounting
 - d) Revenue recognition
- 23. Risk management primarily deals with:** []
- a) Identifying and mitigating financial risks
 - b) Increasing profitability
 - c) Preparing financial statements
 - d) Budgeting
- 24. Debt-to-equity ratio is an example of:** []
- a) Liquidity ratio
 - b) Profitability ratio
 - c) Leverage ratio
 - d) Efficiency ratio
- 25. The cost of equity is calculated using:** []
- a) Return on assets
 - b) Net income
 - c) The capital asset pricing model (CAPM)
 - d) Debt ratio
- 26. Scenario analysis involves:** []
- a) Historical cost analysis
 - b) Evaluating financial outcomes under different conditions
 - c) Compliance reviews
 - d) Cost-benefit analysis
- 27. A key output of financial forecasting is:** []
- a) Variance reports
 - b) Pro forma financial statements
 - c) Audit plans
 - d) Tax filings
- 28. Financial modeling uses:** []
- a) Historical cash flow statements
 - b) Spreadsheet-based simulations
 - c) Annual reports
 - d) Budget variances
- 29. What does sensitivity analysis measure?** []
- a) Tax compliance
 - b) The impact of changing variables on outcomes
 - c) Cost allocation
 - d) Financial statement accuracy


30. Which is not a common financial planning tool? []
- a) Budget
 - b) Forecast
 - c) Auditing standards
 - d) Scenario analysis
31. Revenue recognition standards determine: []
- a) When revenue should be recorded
 - b) How to allocate expenses
 - c) Inventory valuation methods
 - d) Tax calculation rules
32. Consolidated financial statements combine: []
- a) Revenues and expenses
 - b) Parent and subsidiary companies' financials
 - c) Income and cash flows
 - d) Equity and liabilities
33. IFRS differs from GAAP in that IFRS is: []
- a) Country-specific
 - b) Principles-based
 - c) Rules-based
 - d) Tax-focused
34. Leases under the new accounting standards are categorized as: []
- a) Operating leases only
 - b) Finance and operating leases
 - c) Capital leases only
 - d) Expense leases
35. Which is an example of a complex accounting issue? []
- a) Cash flow reporting
 - b) Recording office supplies
 - c) Revenue recognition
 - d) Preparing budgets
36. The primary objective of an audit is to: []
- a) Detect fraud
 - b) Provide assurance on financial statement accuracy
 - c) Prepare tax returns
 - d) Perform cost analysis
37. Internal controls are designed to: []
- a) Prevent errors and fraud
 - b) Increase revenue
 - c) Analyze profitability
 - d) Reduce employee turnover


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- 38. What is the first step in the auditing process?** []
- a) Testing internal controls
 - b) Planning the audit
 - c) Issuing the audit report
 - d) Conducting substantive testing
- 39. Segregation of duties in internal controls means:** []
- a) No one person should control all aspects of a transaction
 - b) All employees work together on a task
 - c) Duties are assigned randomly
 - d) Managers perform all tasks
- 40. Which type of audit focuses on compliance with laws and regulations?** []
- a) Internal audit
 - b) Operational audit
 - c) Compliance audit
 - d) Financial audit
- 41. Tax compliance involves:** []
- a) Maximizing profits
 - b) Adhering to tax laws and regulations
 - c) Preparing financial forecasts
 - d) Performing audits
- 42. Corporate tax planning aims to:** []
- a) Avoid taxes entirely
 - b) Minimize tax liability legally
 - c) Increase taxable income
 - d) Report higher revenues
- 43. Which tax is based on a company's profits?** []
- a) Payroll tax
 - b) Sales tax
 - c) Corporate income tax
 - d) Property tax
- 44. Personal tax deductions reduce:** []
- a) Gross income
 - b) Taxable income
 - c) Net income
 - d) Tax refunds
- 45. Which form is used to file corporate taxes in the U.S.?** []
- a) Form 1120
 - b) Form 1040
 - c) Form 1099
 - d) Form W-2


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- 46. The purpose of the capstone project is to:** []
- a) Apply course concepts to a real-world scenario
 - b) Learn new accounting principles
 - c) Focus on theoretical analysis
 - d) Prepare tax documents
- 47. Financial analysis often involves:** []
- a) Preparing tax returns
 - b) Evaluating financial ratios and trends
 - c) Designing internal controls
 - d) Conducting audits
- 48. What is a deliverable in a financial analysis project?** []
- a) Tax filing
 - b) Ledger entries
 - c) A comprehensive report and presentation
 - d) Audit checklist
- 49. Scenario analysis in the capstone project helps to:** []
- a) Evaluate outcomes under various assumptions
 - b) Improve compliance
 - c) Simplify budgeting
 - d) Create internal controls
- 50. Which of the following is essential in financial reporting?** []
- a) Minimizing errors
 - b) Following GAAP or IFRS standards
 - c) Both a and b
 - d) Neither a nor b



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1.2.1. Certificate/Value Added Courses

Question Paper

42. Training Program on SQL and Database Design


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	TMC201	Training Program on SQL & Database Design		Max Marks:50	Time: 1 Hr

Date :28.12.2019

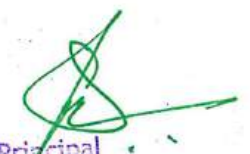
Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

- Which of the following is an example of a relational database management system (RDBMS)? []
 - MySQL
 - Google Docs
 - Windows OS
 - Apache Server
- SQL stands for: []
 - Structured Query Language
 - Sequential Query Language
 - Standard Query List
 - Simple Query Language
- Which of the following is not a valid SQL data type? []
 - INT
 - VARCHAR
 - DATE
 - BYTESTRING
- In relational databases, a table is also known as a: []
 - Relation
 - Tuple
 - Field
 - Schema
- A primary key: []
 - Uniquely identifies each row in a table
 - Can be null
 - Is a duplicate column
 - Is always a foreign key
- A foreign key is used to: []
 - Store numeric data
 - Uniquely identify records
 - Link two tables together
 - Store textual data


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7. The correct SQL command to create a table is: []
a. INSERT TABLE
b. CREATE TABLE
c. SELECT TABLE
d. MODIFY TABLE
8. What does the SELECT statement do? []
a. Updates a table
b. Retrieves data from a table
c. Deletes a record
d. Inserts new data
9. The WHERE clause is used to: []
a. Sort the data
b. Filter rows based on a condition
c. Create a new table
d. Group data
10. Which symbol is used to represent all columns in a SELECT statement? []
a. %
b. *
c. #
d. &
11. To sort records in descending order, you use: []
a. ORDER BY column_name DESC
b. ORDER BY column_name ASC
c. FILTER BY column_name
d. SORT column_name DESC
12. A join operation is used to: []
a. Delete a record
b. Modify column data
c. Combine rows from two or more tables
d. Normalize a table
13. An inner join returns: []
a. All rows from both tables
b. Only matching rows from both tables
c. Only unmatched rows
d. None of the above
14. A subquery is: []
a. A query nested within another query
b. A type of join
c. A normalization step
d. None of the above
15. The GROUP BY clause is used to: []
a. Sort data
b. Filter rows
c. Group rows that have the same values
d. Join tables

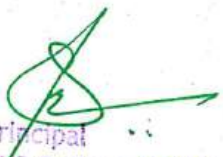

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16. The command to insert data into a table is: []
a. SELECT INTO
b. UPDATE
c. INSERT INTO
d. ALTER TABLE
17. Which keyword is used to remove records from a table? []
a. MODIFY
b. DELETE
c. ALTER
d. INSERT
18. The COMMIT statement: []
a. Cancels a transaction
b. Saves the current transaction permanently
c. Starts a new transaction
d. Reverses a previous action
19. The process of structuring data to reduce redundancy is: []
a. Denormalization
b. Normalization
c. Indexing
d. Encryption
20. A table is in 1NF if it: []
a. Contains only atomic values
b. Contains multivalued attributes
c. Has transitive dependencies
d. Is denormalized
21. Which type of join includes unmatched rows from both tables? []
a. Inner Join
b. Full Outer Join
c. Left Join
d. Cross Join
22. Indexing improves: []
a. Data redundancy
b. Query performance
c. Data security
d. Table creation
23. The DROP INDEX command is used to: []
a. Create a new index
b. Remove an index
c. Update an index
d. Modify a table
24. What is the purpose of a UNIQUE constraint? []
a. To allow duplicates
b. To enforce unique values in a column
c. To set a default value
d. To create foreign keys

25. **A stored procedure:** []
a. Filters rows
b. Is a reusable set of SQL statements
c. Creates an index
d. Removes constraints
26. **What is a trigger in SQL?** []
a. A type of join
b. A stored procedure
c. A set of actions executed when a specific event occurs
d. An index
27. **Which command is used for database recovery?** []
a. INSERT
b. DELETE
c. RESTORE
d. CREATE
28. **The purpose of a backup strategy is:** []
a. To normalize data
b. To join tables
c. To safeguard data against loss
d. To index columns
29. **The GRANT command in SQL is used for:** []
a. Deleting data
b. Inserting records
c. Assigning privileges to users
d. Creating tables
30. **The HAVING clause is used:** []
a. With WHERE for filtering
b. To join tables
c. To filter grouped data
d. To update records
31. **Isolation levels manage:** []
a. Concurrent transactions
b. Joins
c. Normalization
d. Indexing
32. **The NOT NULL constraint ensures:** []
a. A column cannot have null values
b. Unique values
c. Referential integrity
d. Index performance
33. **Which clause restricts rows returned by a query?** []
a. WHERE
b. SELECT
c. FROM
d. JOIN

34. What is a composite key? []
a. A combination of two or more columns to create a unique key
b. A foreign key
c. A single primary key
d. A unique constraint
35. A view is: []
a. A physical copy of data
b. A virtual table based on a query
c. An index
d. A type of constraint
36. Which statement starts a transaction in SQL? []
a. BEGIN SELECT
b. COMMIT
c. BEGIN TRANSACTION
d. ROLLBACK
37. Reducing query time is a benefit of: []
a. Indexing
b. Foreign keys
c. Triggers
d. Transactions
38. Which command retrieves unique values? []
a. SELECT DISTINCT
b. SELECT *
c. SELECT DISTINCT
d. FILTER DISTINCT
39. To change data in a table, use: []
a. SELECT
b. DELETE
c. UPDATE
d. JOIN
40. The term "ACID" in transactions stands for: []
a. Atomicity, Consistency, Isolation, Durability
b. Atomicity, Consistency, Independence, Durability
c. Attributes, Constraints, Integrity, Durability
d. Atomicity, Control, Integrity, Data
41. An example of a DDL command is: []
a. CREATE
b. INSERT
c. SELECT
d. UPDATE
42. The SAVEPOINT command: []
a. Ends a transaction
b. Deletes data
c. Sets a point within a transaction for partial rollback
d. Commits a transaction

43. **A cross join:** []
a. Returns matched rows
b. Filters records
c. Combines each row from one table with all rows from another
d. Returns grouped data
44. **Which constraint enforces referential integrity?** []
a. CHECK
b. FOREIGN KEY
c. UNIQUE
d. PRIMARY KEY
45. **A left join returns:** []
a. All rows from the left table and matching rows from the right
b. Only matching rows
c. All rows from both tables
d. None of the above
46. **A default constraint:** []
a. Prevents duplicate data
b. Specifies a primary key
c. Sets a default value for a column
d. Joins tables
47. **To prevent unauthorized access, databases use:** []
a. Joins
b. Roles and privileges
c. Indexes
d. Transactions
48. **Normalization removes:** []
a. Security
b. Unique values
c. Redundancy
d. Joins
49. **Denormalization is useful for:** []
a. Removing constraints
b. Increasing normalization
c. Improving query performance
d. Creating indexes
50. **The primary role of a relational schema is to:** []
a. Define the structure of a database
b. Query data
c. Manage transactions
d. Create indexes



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1.2.1. Certificate/Value Added Courses

Question Paper

43. Certificate Program on Design Thinking and Innovation


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB202	Certificate Program on Design Thinking and Innovation		Max Marks:50	Time: 1 Hr

Date :28.12.2019


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

**Answer the following Multiple Choice Questions:
Each question carries equal marks:**

1. **What is the main goal of Design Thinking?** []
 - A. Problem-solving with user-centered solutions
 - B. Developing technical skills
 - C. Increasing company revenue
 - D. Reducing production costs
2. **The term "Design Thinking" was popularized by:** []
 - A. Steve Jobs
 - B. Tim Brown
 - C. Elon Musk
 - D. Peter Drucker
3. **Which of the following is NOT a key principle of Design Thinking?** []
 - A. Empathy
 - B. Prototyping
 - C. Cost analysis
 - D. Iteration
4. **Empathy in Design Thinking refers to:** []
 - A. Defining business goals
 - B. Understanding the user's needs
 - C. Creating prototypes
 - D. Collecting data
5. **Which technique is NOT used in empathy research?** []
 - A. Interviews
 - B. Financial analysis
 - C. Observations
 - D. User journey mapping
6. **User personas are used to:** []
 - A. Represent typical users and their behaviors
 - B. Analyze profit margins
 - C. Develop technical solutions
 - D. Define market competition



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7. **A problem statement should:** []
A. Include detailed technical specifications
B. Focus on user needs and insights
C. Be as broad as possible
D. Avoid focusing on constraints
8. **What is a Point-of-View (POV) statement?** []
A. A statement framing the user, need, and insight
B. A financial report of design costs
C. A company's mission statement
D. A summary of design aesthetics
9. **Brainstorming is an example of:** []
A. Convergent thinking
B. Divergent thinking
C. Linear thinking
D. Problem definition
10. **In Design Thinking, ideation focuses on:** []
A. Defining business models
B. Generating creative ideas
C. Conducting market research
D. Analyzing competition
11. **Convergent thinking involves:** []
A. Expanding the number of ideas
B. Narrowing down to the best ideas
C. Generating diverse solutions
D. None of the above
12. **Which is a low-fidelity prototyping method?** []
A. Digital wireframes
B. Paper sketches
C. High-resolution mockups
D. Fully functional applications
13. **What is the primary purpose of prototyping?** []
A. To test and explore ideas quickly
B. To finalize the product
C. To analyze financial risk
D. To present to stakeholders
14. **Which tool is commonly used in rapid prototyping?** []
A. Spreadsheets
B. Presentation software
C. Cardboard models
D. Data analysis tools
15. **Testing in Design Thinking involves:** []
A. Collecting user feedback on prototypes
B. Finalizing designs
C. Budget estimation
D. Code optimization


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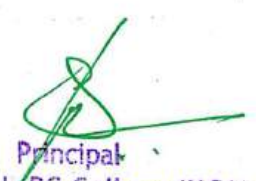
16. **Analyzing feedback is crucial because:** []
A. It replaces user testing
B. It reduces costs
C. It provides insights for iteration
D. It improves marketing
17. **Which phase emphasizes refining solutions based on feedback?** []
A. Ideation
B. Testing
C. Problem definition
D. Empathy
18. **Innovation in Design Thinking means:** []
A. Creating identical products
B. Developing novel, user-focused solutions
C. Eliminating user feedback
D. Increasing production speed
19. **Which is NOT a strategy for scaling innovations?** []
A. Rapid prototyping
B. Strategic partnerships
C. Ignoring user feedback
D. Process improvements
20. **A collaborative design team thrives on:** []
A. Individual achievements
B. Shared goals and diverse perspectives
C. Hierarchical structures
D. Isolated work
21. **Design Thinking workshops should focus on:** []
A. Top-down management
B. Inclusive participation
C. Single-decision makers
D. Cost analysis
22. **Managing team conflict requires:** []
A. Active listening and clear communication
B. Avoiding disagreements
C. Ignoring differences
D. Imposing decisions
23. **Applying Design Thinking to real-world problems typically involves:** []
A. Marketing research only
B. Financial forecasting
C. A human-centered approach
D. Automated processes
24. **A successful presentation of a solution should:** []
A. Avoid user feedback
B. Focus only on business goals
C. Highlight user needs and the impact of the solution
D. Minimize details

25. **Emerging trends in Design Thinking emphasize:** []
A. Static workflows
B. Adaptability and technological integration
C. Isolated ideation
D. Traditional problem-solving methods
26. **Which future trend impacts Design Thinking?** []
A. Reducing creativity
B. Decreasing empathy research
C. AI and machine learning tools
D. Eliminating prototypes
27. **Developing an innovation mindset involves:** []
A. Sticking to proven methods
B. Embracing curiosity and experimentation
C. Avoiding risks
D. Following strict rules
28. **Empathy maps are tools for:** []
A. Understanding user emotions and experiences
B. Financial projections
C. Coding designs
D. Supply chain analysis
29. **Journey maps help designers:** []
A. Define technical requirements
B. Track expenses
C. Visualize user experiences
D. Create legal contracts
30. **The double diamond model relates to:** []
A. Data modeling
B. Financial strategy
C. Divergent and convergent thinking
D. Supply chain
31. **What is the purpose of crafting a problem statement?** []
A. To clearly define the user's problem
B. To create a marketing plan
C. To solve technical errors
D. To finalize a product prototype
32. **Which technique is effective for generating multiple ideas during ideation? []**
A. Brainstorming
B. User interviews
C. A/B testing
D. Market analysis
33. **Divergent thinking aims to:** []
A. Expand the range of possible ideas
B. Narrow down solutions
C. Refine final prototypes
D. Optimize user testing


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34. Which of the following represents a high-fidelity prototype? []
A. Sketches on paper
B. Wireframe models
C. Interactive digital interface
D. Hand-drawn mockups
35. The final phase of Design Thinking is: []
A. Testing and iteration
B. Prototyping
C. Ideation
D. Problem definition
36. When collecting user feedback, it is important to: []
A. Avoid user criticism
B. Validate only positive feedback
C. Listen to both positive and negative feedback
D. Focus solely on technical reviews
37. Which of these methods is commonly used for gathering feedback? []
A. Marketing surveys
B. Usability testing
C. Financial modeling
D. Process mapping
38. Prototypes are refined based on: []
A. Sales data
B. Aesthetic design trends
C. Insights from user feedback
D. Competitor analysis
39. A key feature of Design Thinking is: []
A. Iterative refinement
B. Linear progress
C. Strict adherence to initial ideas
D. Avoiding user input
40. A successful innovation strategy includes: []
A. Ignoring competitors
B. Aligning solutions with user needs
C. Focusing only on technology
D. Eliminating design constraints
41. Collaborative design encourages: []
A. Active team engagement
B. Isolated individual work
C. Top-down decision-making
D. Minimal communication
42. Facilitating a workshop requires: []
A. Strictly controlling the agenda
B. Encouraging open participation
C. Limiting brainstorming
D. Reducing group interaction

43. Which is NOT a key factor in managing team dynamics? []
A. Trust and collaboration
B. Effective communication
C. Avoiding conflict altogether
D. Mutual respect
44. Real-world application of Design Thinking often includes: []
A. Ignoring market trends
B. Iterative development
C. Designing without feedback
D. Focusing only on profit
45. Case studies in Design Thinking demonstrate: []
A. Technical precision
B. Successful innovation through human-centered design
C. Financial risk management
D. Static business models
46. Which trend is influencing the future of Design Thinking? []
A. Reduced focus on user experience
B. Increased use of digital tools and AI
C. Decreased emphasis on collaboration
D. More rigid design processes
47. A personal innovation mindset promotes: []
A. Avoiding risks
B. Curiosity and adaptability
C. Traditional thinking
D. Fixed roles
48. Team conflict resolution should prioritize: []
A. Assigning blame
B. Open dialogue and understanding
C. Avoiding discussions
D. Withholding feedback
49. Design Thinking promotes solutions that are: []
A. Desirable, feasible, and viable
B. Expensive and complex
C. Technical and rigid
D. Profit-driven only
50. The best way to test a prototype is: []
A. Observing real user interaction
B. Creating a detailed financial report
C. Using automated tools only
D. Implementing the final version immediately



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1.2.1. Certificate/Value Added Courses

Question Paper

44. Certificate Program on Human Resources


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMB201	Certificate Program on Human Resources		Max Marks:50	Time: 1 Hr

Date : 10.01.2020

Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What is one of the main responsibilities of HR professionals?** []
A. Overseeing financial audits
B. Recruitment and hiring of employees
C. Designing marketing strategies
D. Managing IT infrastructure
2. **What role does HR play in achieving business goals?** []
A. Providing external business funding
B. Aligning HR strategies with business objectives
C. Managing customer relations
D. Planning marketing campaigns
3. **Which factor has significantly evolved HR practices over the years?** []
A. Reducing salary costs
B. Focusing solely on administration
C. Technology and globalization
D. Avoiding employee engagement
4. **What is the strategic role of HR in an organization?** []
A. Issuing company policies alone
B. Contributing to organizational growth and planning
C. Performing basic clerical work
D. Solely organizing company events
5. **Which of the following is NOT an HR responsibility?** []
A. Payroll processing
B. Recruitment and selection
C. Stock market investments
D. Employee performance management
6. **What is the primary purpose of recruitment strategies?** []
A. To retain existing employees
B. To attract qualified candidates
C. To manage employee benefits
D. To improve sales performance

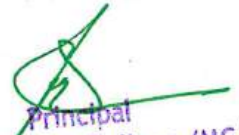

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7. Which is an example of an internal recruitment method? []
A. Job fairs
B. Online job boards
C. Promotions or transfers
D. Recruitment agencies
8. What is a key component of an effective interviewing process? []
A. Asking only personal questions
B. Using structured interview questions
C. Avoiding follow-up questions
D. Limiting interviews to one minute
9. What does onboarding aim to achieve? []
A. Employee dismissal
B. Smooth integration of new hires
C. Immediate performance appraisals
D. Salary negotiations
10. Which of these is a sourcing technique for candidates? []
A. Organizing annual company meetings
B. Conducting performance reviews
C. Posting job ads on social media
D. Issuing payslips
11. What is the main purpose of performance appraisals? []
A. Reducing employee work hours
B. Assigning tasks randomly
C. Evaluating employee performance and setting goals
D. Managing payroll processes
12. Which method is used to set performance goals? []
A. Random guessing
B. SMART goals framework
C. Conducting social events
D. Limiting role responsibilities
13. What is critical when providing employee feedback? []
A. Avoiding any suggestions
B. Focusing only on criticism
C. Providing constructive and actionable feedback
D. Delaying feedback for months
14. What is an example of a performance issue? []
A. Positive teamwork
B. Timely task completion
C. Consistent failure to meet deadlines
D. Following company guidelines
15. What tool is commonly used for performance evaluation? []
A. Organizational charts
B. Salary structures
C. 360-degree feedback
D. Employee benefits reports
16. What is the first step in developing a training program? []
A. Delivering random training content
B. Conducting a training needs assessment
C. Avoiding discussions with managers
D. Selecting unqualified trainers


17. **What does succession planning aim to address?** []
 A. Employee onboarding
 B. Preparing future leaders in the organization
 C. Hiring temporary staff
 D. Conducting recruitment audits
18. **How can training programs be delivered effectively?** []
 A. Through performance dismissals
 B. Using only written communication
 C. Combining theoretical and practical training
 D. Relying solely on online manuals
19. **What does career development focus on?** []
 A. Short-term employee projects
 B. Employee social events
 C. Long-term professional growth
 D. Job transfers
20. **Which tool assesses training effectiveness?** []
 A. Payroll data
 B. Post-training evaluations
 C. Job offers
 D. Marketing reports
21. **What determines an organization's pay scale?** []
 A. Employee preferences
 B. Random decisions
 C. Job role, industry standards, and experience
 D. Marketing budgets
22. **Which of these is a common employee benefit?** []
 A. Shareholder dividends
 B. Healthcare insurance
 C. Discounted products
 D. Personal loans
23. **What is the purpose of compensation benchmarking?** []
 A. Ignoring market trends
 B. Comparing pay rates to industry standards
 C. Reducing salary costs
 D. Delaying employee compensation
24. **What is included in a compensation strategy?** []
 A. Staff scheduling
 B. Salary structures and benefits plans
 C. IT department tasks
 D. Marketing campaigns
25. **What is critical for benefits administration?** []
 A. Reducing employee access
 B. Compliance with legal requirements
 C. Assigning random benefits
 D. Avoiding documentation
26. **What does FMLA stand for?** []
 A. Federal Management Law Authority
 B. Family and Medical Leave Act
 C. Federal Medical Leadership Association
 D. Financial Management Leave Act

27. **What is a key focus of the ADA?** []
A. Managing financial systems
B. Protecting employees with disabilities
C. Promoting high salaries
D. Avoiding recruitment
28. **Which body enforces anti-discrimination laws?** []
A. OSHA
B. FDA
C. EEOC
D. FTC
29. **What is a critical component of ethical HR practices?** []
A. Ignoring employee complaints
B. Reducing company policies
C. Ensuring fairness and transparency
D. Delaying onboarding
30. **What does compliance in HR ensure?** []
A. Ignoring employment laws
B. Adherence to legal and ethical standards
C. Employee terminations
D. Reducing organizational goals
31. **What are HR metrics used for?** []
A. Employee salary payments
B. Measuring HR performance
C. Planning recreational events
D. Job dismissals
32. **Which data collection method is widely used in HR?** []
A. Random employee discussions
B. Employee surveys
C. Marketing analysis
D. Vendor selection
33. **What is the goal of HR analytics?** []
A. Planning annual leave
B. Ignoring HR processes
C. Improving HR practices using data
D. Reducing staff benefits
34. **What is the main goal of conflict resolution in HR?** []
A. Avoiding communication between parties
B. Firing employees involved in conflicts
C. Resolving disputes to maintain a productive environment
D. Ignoring workplace grievances
35. **Which of these enhances employee engagement?** []
A. Lack of recognition
B. Providing growth opportunities and recognition
C. Reducing feedback mechanisms
D. Increasing workload
36. **What is a key factor in building a positive workplace culture?** []
A. High employee turnover
B. Avoiding communication channels
C. Promoting trust, respect, and inclusion
D. Delayed employee feedback

37. **How does HR handle employee grievances?** []
A. Ignoring complaints
B. Allowing conflicts to escalate
C. Following formal grievance-handling procedures
D. Terminating employees immediately
38. **Which strategy boosts workplace motivation?** []
A. Removing employee benefits
B. Implementing reward and recognition programs
C. Assigning repetitive tasks
D. Limiting career growth
39. **What is the purpose of creating HR policies?** []
A. Avoiding employee concerns
B. Setting clear guidelines for behavior and processes
C. Reducing documentation
D. Enhancing IT systems
40. **Which is an essential step in policy implementation?** []
A. Avoiding communication to employees
B. Reducing compliance tracking
C. Effectively communicating policies to all employees
D. Delaying policy rollouts
41. **Why is policy compliance important?** []
A. To complicate processes
B. To ensure consistency and avoid legal risks
C. To reduce employee engagement
D. To prioritize random procedures
42. **What does HR use to enforce company policies?** []
A. Reducing employee benefits
B. Avoiding monitoring systems
C. Consistent disciplinary procedures
D. Conducting performance evaluations
43. **What does proper documentation of HR policies ensure?** []
A. Ignoring employment laws
B. Immediate employee termination
C. Clarity, consistency, and legal protection
D. Increasing workload
44. **What does DEI stand for in HR?** []
A. Development, Engagement, and Implementation
B. Department, Education, and Inclusion
C. Diversity, Equity, and Inclusion
D. Delegation, Ethics, and Involvement
45. **What is the purpose of DEI programs?** []
A. Excluding certain employee groups
B. Reducing workplace morale
C. Promoting fairness, equality, and inclusion in the workplace
D. Limiting employee engagement
46. **Which of these reflects a DEI best practice?** []
A. Promoting workplace homogeneity
B. Avoiding DEI discussions
C. Providing bias-awareness training
D. Delaying DEI initiatives


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47. **What is a method to measure the success of DEI programs?** []
A. Reducing communication efforts
B. Avoiding progress tracking
C. Monitoring employee demographics and feedback
D. Excluding employee concerns
48. **What principle does equity in DEI address?** []
A. Equal workload for all employees
B. Avoiding role diversity
C. Providing fair access to opportunities and resources
D. Reducing workplace flexibility
49. **Why is workplace diversity important?** []
A. To reduce team communication
B. To encourage varied perspectives and innovation
C. To limit career growth opportunities
D. To enforce a single way of thinking
50. **What should organizations avoid when implementing DEI?** []
A. Creating inclusive policies
B. Offering equal opportunities
C. Tokenism or superficial diversity efforts
D. Providing bias training



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1.2.1. Certificate/Value Added Courses

Question Paper

45. Certificate Program on BlockChain and Cryptocurrency


College code 1304		Aurora's PG College (MCA) Uppal, Hyderabad			
Course Code	CMC201	Certificate Program on Block Chain and Crypto Currency		Max Marks:50	Time: 1 Hr

Date :14.02.2020


Name of the Student		Invigilator Sign	
Hall Ticket Number		Student Sign	
Course		Marks	

Answer the following Multiple Choice Questions:
Each question carries equal marks:

1. **What is the primary purpose of blockchain technology?** []
 A) To store large amounts of data
 B) To enable secure and decentralized transactions
 C) To improve internet speed
 D) To reduce electricity consumption
2. **Which of the following is a component of blockchain architecture?** []
 A) Blocks
 B) Servers
 C) Databases
 D) Files
3. **What is a public blockchain?** []
 A) A blockchain only accessible by governments
 B) A blockchain where anyone can join and participate
 C) A blockchain restricted to private businesses
 D) A blockchain managed by a single entity
4. **Which consensus mechanism uses computational work to validate Transactions?** []
 A) Proof of Work
 B) Proof of Stake
 C) Delegated Proof of Stake
 D) Practical Byzantine Fault Tolerance
5. **What is Proof of Stake (PoS)?** []
 A) A consensus mechanism based on mining power
 B) A consensus mechanism based on validators' stake in the system
 C) A consensus mechanism based on random selection
 D) A consensus mechanism based on work done
6. **Which consensus mechanism is used in Bitcoin?** []
 A) Proof of Work
 B) Proof of Stake
 C) Delegated Proof of Stake
 D) Practical Byzantine Fault Tolerance


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7. **What is the main purpose of a Smart Contract?** []
A) To increase blockchain storage
B) To automate and enforce contract execution without intermediaries
C) To make transactions anonymous
D) To reduce blockchain transaction fees
8. **What is the main feature of a decentralized application (DApp)?** []
A) It operates through a central server
B) It requires an intermediary
C) It operates on a decentralized network
D) It is hosted on traditional cloud services
9. **Which blockchain platform is most commonly used for developing decentralized applications (DApps)?** []
A) Hyperledger
B) Ethereum
C) Binance Smart Chain
D) Solana
10. **What is the primary function of cryptocurrency wallets?** []
A) To store private keys and allow transactions
B) To store physical cash
C) To provide trading analytics
D) To mine cryptocurrencies
11. **What is the largest cryptocurrency by market capitalization?** []
A) Ethereum
B) Bitcoin
C) Ripple
D) Litecoin
12. **Which of the following is a popular Altcoin?** []
A) Bitcoin
B) Litecoin
C) Dogecoin
D) Both B and C
13. **Which of the following is NOT a major cryptocurrency?** []
A) Bitcoin
B) Solana
C) Ethereum
D) Ripple
14. **What does mining in the cryptocurrency context refer to?** []
A) Storing data in a secure vault
B) Verifying transactions and adding them to the blockchain
C) Selling cryptocurrencies
D) Trading tokens for profit
15. **Which blockchain platform uses the programming language Solidity?** []
A) Ethereum
B) Hyperledger
C) Binance Smart Chain
D) EOS


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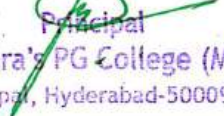
16. Which of the following tools is used for smart contract development? []
A) Hyperledger
B) Truffle
C) Ethereum Explorer
D) Remix IDE
17. What is the role of consensus mechanisms in a blockchain? []
A) To increase transaction fees
B) To ensure all participants agree on the transaction history
C) To store transaction data
D) To create new cryptocurrencies
18. What is the main benefit of using a private blockchain? []
A) It is open to the public
B) It provides more control and privacy
C) It requires mining to validate transactions
D) It increases transparency
19. What is the role of miners in Proof of Work (PoW)? []
A) To manage cryptocurrency wallets
B) To validate transactions and add blocks to the blockchain
C) To develop smart contracts
D) To trade cryptocurrencies
20. What is a 51% attack? []
A) A vulnerability that affects only Bitcoin
B) When an entity controls more than 50% of the network's computing power, allowing them to alter transactions
C) A security flaw in Ethereum's smart contracts
D) A vulnerability in cryptocurrency wallets
21. What does KYC stand for in the context of cryptocurrencies? []
A) Know Your Customer
B) Keep Your Cryptos
C) Keep Your Coins
D) Knowledge Yearly Check
22. Which of the following is an example of a use case for blockchain in voting systems? []
A) Storing voting results on a centralized server
B) Allowing anyone to vote without restrictions
C) Using blockchain to securely record and verify votes
D) Providing voting through emails
23. Which technology is most commonly associated with the implementation of smart contracts? []
A) Blockchain
B) Artificial Intelligence
C) Cloud Computing
D) Internet of Things

24. Which of the following cryptocurrencies is known for its smart contract functionality? []
A) Bitcoin
B) Ethereum
C) Ripple
D) Litecoin
25. What is the role of a validator in Proof of Stake? []
A) To perform computations to solve puzzles
B) To manage a mining pool
C) To validate transactions based on the amount of cryptocurrency they hold
D) To act as a broker for buying and selling cryptocurrency
26. Which of the following is a major benefit of blockchain technology? []
A) It increases centralization
B) It reduces the need for digital security
C) It ensures decentralized and immutable transaction records
D) It makes cryptocurrency transactions illegal
27. What is a common use case for blockchain in supply chain management? []
A) Tracking user interactions with websites
B) Ensuring transparency and traceability of goods through the supply chain
C) Storing customer information securely
D) Sending payments to suppliers instantly
28. What is the maximum supply of Bitcoin? []
A) 21 million
B) 50 million
C) 100 million
D) Unlimited
29. What type of blockchain allows only select participants to access and validate transactions? []
A) Public blockchain
B) Private blockchain
C) Consortium blockchain
D) Hybrid blockchain
30. Which blockchain platform is specifically designed for enterprise use? []
A) Hyperledger
B) Ethereum
C) Binance Smart Chain
D) Solana
31. What is the primary function of decentralized exchanges (DEXs)? []
A) To facilitate centralized trading of cryptocurrencies
B) To allow peer-to-peer trading of cryptocurrencies without a central authority
C) To provide liquidity for cryptocurrency markets
D) To offer fiat-to-crypto conversion services

32. Which of the following is a benefit of using blockchain for digital identity management? []
A) It offers more security and privacy compared to traditional identity management systems
B) It reduces the need for secure passwords
C) It enables centralized control of personal data
D) It eliminates the need for personal identification
33. What is the primary function of a token in a blockchain ecosystem? []
A) To act as a mining tool
B) To represent value or assets on the blockchain
C) To store personal data
D) To encrypt transaction records
34. What is the purpose of using a hash function in blockchain? []
A) To encrypt transaction data
B) To create a unique identifier for each block
C) To store data on the blockchain
D) To mine cryptocurrencies
35. Which blockchain consensus mechanism is known for being energy Efficient? []
A) Proof of Work
B) Proof of Stake
C) Delegated Proof of Stake
D) Practical Byzantine Fault Tolerance
36. What does the acronym AML stand for in cryptocurrency regulation? []
A) Anti-Money Laundering
B) Automated Market Liquidity
C) Asset Management Ledger
D) Authorized Money Lending
37. Which of the following is a major challenge for blockchain scalability? []
A) Centralization
B) Transaction speed and network congestion
C) Energy consumption
D) Regulation
38. What is the significance of the block size in blockchain? []
A) It determines the number of miners in the network
B) It defines the number of transactions per block
C) It dictates the amount of data that can be included in a single block
D) It controls the difficulty of the mining process
39. Which cryptocurrency uses the Ethereum Virtual Machine (EVM)? []
A) Litecoin
B) Ethereum
C) Bitcoin
D) Ripple
40. What is the main challenge with cryptocurrency security? []
A) Difficulty in converting it to fiat currency
B) Vulnerabilities such as hacking and phishing attacks
C) Excessive transaction fees
D) Lack of regulation

41. Which of the following is a feature of a blockchain's immutability? []
A) Once data is added to the blockchain, it cannot be altered
B) Transactions can be erased at any time
C) Data is easily accessible for modification
D) All participants can change transaction data
42. What does the term "gas" refer to in the Ethereum network? []
A) The amount of power required to mine Ethereum
B) The fee required to execute operations and transactions
C) The computational power used to create new blocks
D) A type of cryptocurrency used for rewards
43. What is the main benefit of using a consortium blockchain? []
A) It allows complete anonymity
B) It is fully decentralized
C) It enables collaboration between multiple trusted entities
D) It restricts access to a single organization
44. What is the purpose of using a public key in cryptocurrency? []
A) To receive transactions
B) To store private keys securely
C) To sign transaction data
D) To validate transactions
45. What is the first step in cryptocurrency mining? []
A) Sending transactions to the network
B) Creating new wallets
C) Verifying transaction blocks using computational power
D) Converting cryptocurrency into fiat
46. What is the primary role of a decentralized autonomous organization (DAO)? []
A) To centralize control over decision-making
B) To allow members to make decisions through a voting system
C) To automate financial services
D) To perform large-scale computations
47. Which of the following is NOT a feature of blockchain technology? []
A) Transparency
B) Centralization
C) Decentralization
D) Security
48. What is the role of cryptography in blockchain? []
A) To store transaction data
B) To secure transactions and ensure privacy
C) To enhance blockchain speed
D) To facilitate network consensus
49. Which of the following is true about cryptocurrency transactions? []
A) They are reversible
B) They are irreversible and secure once confirmed
C) They require intermediaries like banks
D) They occur only on private networks

50. What is the primary difference between proof of stake and proof of work? []
- A) Proof of stake relies on staked tokens for validation, while proof of work relies on computational power
 - B) Proof of stake requires more electricity than proof of work
 - C) Proof of stake is used by Bitcoin
 - D) Proof of work is faster than proof of stake


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