

Reference ID: _____ **Name:** _____

Program (IT/IS): _____ **Signature:** _____

University of Management and Technology

Admission Test

Fall 2021

MS (IT/IS)

Maximum Time: 60 Minutes

Total Marks: 100

Do NOT turn until you are told to do so

1. With SQL, how can you return the number of records in the "Persons" table?
 - A. SELECT COUNT(*) FROM Persons
 - B. SELECT NO(*) FROM Persons
 - C. SELECT LEN(*) FROM Persons
 - D. SELECT COLUMNS(*) FROM Persons

2. With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" starts with an "a"?
 - A. SELECT * FROM Persons WHERE FirstName LIKE 'a%'
 - B. SELECT * FROM Persons WHERE FirstName='a'
 - C. SELECT * FROM Persons WHERE FirstName LIKE '%a'
 - D. SELECT * FROM Persons WHERE FirstName='%a%'

3. Which name must be unique within a database?
 - A. Table
 - B. Field
 - C. Record
 - D. Character

4. The overall description of a database is called_____.
 - A. Data integrity
 - B. Data manipulation
 - C. Database schema
 - D. Data definition

5. What is the simplest model of software development paradigm?
 - A. Spiral model
 - B. Big Bang model
 - C. V-model
 - D. Waterfall model

6. An entity in ER Model is a real world being, which has some properties called_____.
 - A. Attributes
 - B. Relationship
 - C. Domain
 - D. None of the above

7. Which design identifies the software as a system with many components interacting with each other?
- A. Architectural design
 - B. High-level design
 - C. Detailed design
 - D. Both B & C
8. Software project manager is engaged with software management activities. He is responsible for _____.
- A. Project planning
 - B. Monitoring the progress
 - C. Communication among stakeholders
 - D. All mentioned above
9. Which of these primary objective(s) has (have) to be achieved for the requirement model?
- A. To describe what the customer requires
 - B. To establish a basis for the creation of a software design
 - C. To define a set of requirements that can be validated once the software is developed
 - D. All mentioned above
10. Which depicts flow of control in program modules?
- A. Flowchart
 - B. Data Flow Diagram (DFD)
 - C. Both A & B
 - D. None of the above
11. Which chart is a tool that depicts project as network diagram that is capable of graphically representing main events of project in both parallel and consecutive way?
- A. PERT chart
 - B. Gantt chart
 - C. Both A & B
 - D. None of the above

12. Which protocol provides end to end error and flow control?

- A. UDP
- B. TCP
- C. PPPIP
- D. None of the above

13. The time required to examine the packet's header and determine where to direct the packet is part of _____

- A. Processing delay
- B. Queuing delay
- C. Transmission delay
- D. Propagation delay

14. ICMP is primarily used for _____

- A. Error and diagnostic functions
- B. Addressing
- C. Forwarding
- D. Routing

15. Flow control is provided by which layer of OSI model?

- A. Presentation Layer
- B. Network Layer
- C. Physical Layer
- D. Data Link Layer

16. Which multiplexing technique used to transmit digital signals?

- A. FDM
- B. TDM
- C. WDM
- D. FDM & WDM

17. To accomplish flow control, TCP uses a _____ window protocol.

- A. Limited-size
- B. Sliding
- C. Fixed-size
- D. None of the above

18. What is the relationship between Car and Tyre?

- A. Inheritance
- B. Composition
- C. Association
- D. Single Inheritance

19. Pick out the correct statement from the following

- A. A friend function may be a member of another class
- B. A friend function may not be a member of another class
- C. A friend function may or may not be a member of another class
- D. None of the mentioned

20. Abstract class has at least _____

- A. One virtual function
- B. Two virtual functions
- C. No virtual function
- D. One friend function

21. Object is an instance of a _____

- A. Class
- B. Array
- C. Pointer
- D. Design Pattern

22. Which member can never be accessed by inherited classes?

- A. Private member function
- B. Public member function
- C. Protected member function
- D. All can be accessed

23. Can main () function be made private?

- A. Yes, always
- B. Yes, if program doesn't contain any classes
- C. No, because main function is user defined
- D. No, never

24. Process of inserting an element in stack is called _____

- A. Create
- B. Push
- C. Evaluation
- D. Pop

25. What is the maximum number of children that a binary tree node can have?

- A. 0
- B. 1
- C. 2
- D. 3

26. The optimal depth of a binary tree is given as?

- A. $O(N)$
- B. $O(\sqrt{N})$
- C. $O(N^2)$
- D. $O(\log_2 N)$

27. A repeater is used to _____.

- A. Amplify Signals
- B. Remove Noise
- C. Route Signals
- D. None of the above

28. Components used for interconnecting dissimilar networks that use different communication protocols.

- A. Switches
- B. Routers
- C. Gateways
- D. Bridges

29. A relational database consists of a collection of

- A. Tables
- B. Fields
- C. Records
- D. Keys

30. In relational database model, the term relation refers to -----
- A. A Tuple
 - B. A Table
 - C. A Record
 - D. An Attribute
31. Which runs on computer hardware and serve as platform for other software to run on?
- A. Operating System
 - B. Application Software
 - C. Web Browser
 - D. All of above
32. ----- are used to capture user requirements
- A. Use Case Diagrams
 - B. Sequence Diagrams
 - C. Class Diagrams
 - D. Activity Diagrams
33. The correct flow of activities in UML paradigm is
- A. Use case analysis after sequence diagrams
 - B. Sequence diagrams after test analysis
 - C. Class diagrams after use case analysis
 - D. All of above
34. The ----- testing can be performed in absence of source code.
- A. White box
 - B. Black box
 - C. Cyclomatic complexity
 - D. Refactoring
35. ----- is an example of volatile memory
- A. ROM
 - B. Hard Disk
 - C. CD
 - D. RAM

36. Which data structure does require contiguous memory?

- A. Linked List
- B. Graph
- C. Array
- D. All of the above

37. CNG burns less efficiently than gasoline _____.

- A. burn
- B. burns
- C. should burn
- D. would burn

38. He is not willing to reveal the identity of his _____.

- A. Inform
- B. Informant
- C. Informal
- D. Information

39. He is ----- weak ----- walk.

- A. To, too
- B. Too, to
- C. To, to
- D. Too, too

40. The metro station is right _____ the airport.

- A. Below
- B. Under
- C. Beneath
- D. None of the above

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ANSWER SHEET

Valid answer choice is **A, B, C or D only**. No other choice would be considered as a valid answer.

Question Number	Answer Choice	Question Number	Answer Choice	Question Number	Answer Choice	Question Number	Answer Choice
1		12		23		34	
2		13		24		35	
3		14		25		36	
4		15		26		37	
5		16		27		38	
6		17		28		39	
7		18		29		40	
8		19		30			
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