

**D-103**  
**Domain Knowledge Test-2022**  
**Computer Science & Engineering**

OMR Sr. No. \_\_\_\_\_

Booklet Sr. No. \_\_\_\_\_

Time: **60 Minutes**

Total Questions: **50**

Max Marks: **100**

Roll No. (In figure) \_\_\_\_\_ (in words) \_\_\_\_\_

Signature of Candidate

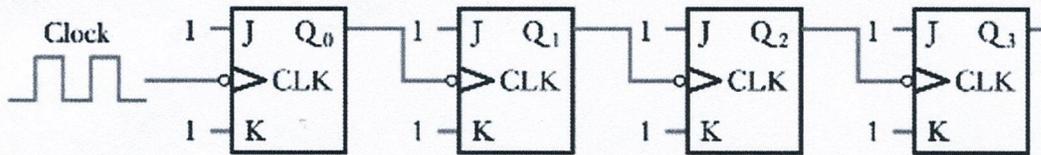
Signature of Invigilator

**IMPORTANT**  
**DO NOT OPEN THE BOOKLET UNLESS YOU ARE ASKED TO DO SO**  
**FIRST READ FOLLOWING INSTRUCTIONS CAREFULLY**

1. The candidate will fill up required particulars including his/her roll no. and signature on the OMR sheet with ball point pen (Black/Blue) in the appropriate boxes.
2. Question booklet and OMR sheet will be distributed to the candidates ten minutes before the commencement of the test.
3. Immediately on opening the question-booklet, the candidate should check the booklet and ensure that it contains 50 multiple choice objective type questions (Sr. No. 1 to 50) and the OMR Sheet (Answer-Sheet) for answers and that none question is missing. Discrepancy, if any, should be reported by the candidate to the invigilator within 5 (five) minutes of the opening of the question booklet. If deem fit, a correct question booklet/OMR sheet shall be supplied.
4. **For each question, four suggested answers a, b, c, d are given. The candidate has to choose only one answer which he/she considers the correct or the most appropriate one. If candidate darkens more than one circle or cutting/overwriting/erasing putting of white fluid or any other chemicals on OMR Sheet, then such answer(s) shall not be evaluated.**
5. The answer should be marked by darkening appropriate circle provided in front of the concerned serial number, with **black/blue ball point pen only. Use of pencil is not allowed.** For instance, while answering the Question No. 26 of the question booklet, the correct answer a or b or c or d at Serial No. 26 of OMR sheet should only be darkened.
6. **Each correct answer will be awarded 02 marks. There will be NEGATIVE marking of 0.25% marks for each wrong answer in the Test.**
7. The candidate should be careful in handling the question-paper and in darkening the responses on the OMR Sheet. **The second question booklet/OMR sheet will not be supplied in any case.**
8. Bringing of in-criminal materials, electronic gadgets/devices including cell phone and calculators in the premises of the examination centre is strictly prohibited. Possessing of in-criminal materials, electronic gadgets/devices and any other aiding material in the examination hall will be a serious offence and will attract the cancellation of your candidature.
9. The candidate will not be permitted to leave the examination hall before the conclusion of the test. The candidate should make sure that question-booklet (including OMR sheet) is handed over to the invigilator before leaving the examination hall at the end of the test, failing which a case of use of unfair-means/misbehaviour will be registered against him/her, in addition to lodging of an FIR with the police. Further, OMR-sheet of such a candidate will not be evaluated.
10. The candidate can do rough-work on the back of the title cover of question booklet. **Rough-work on OMR sheet is strictly prohibited.**

1. Decision support systems usually:
  - a) Serve managers interested in weekly, monthly, and yearly results, not day-to-day activities.
  - b) Help managers make decisions that are unique, rapidly changing, and not easily specified in advance.
  - c) Provide managers with a generalized computing and telecommunications capacity that can be applied to a changing array of problems.
  - d) Perform and record the daily routine transactions necessary to the conduct of business.

2. What is the function of the following circuit?



- a) A four-bit shift register
  - b) A four-bit ripple counter
  - c) A four-bit memory register
  - d) None of the above
3. What is the direction of address bus?
    - a) Uni directional into microprocessors
    - b) Uni directional out of microprocessors
    - c) Bi directional
    - d) None
  4. Which file keeps commands to execute automatically when OS is started?
    - a) command.com
    - b) any batch file
    - c) autoexec.bat
    - d) config.sys
  5. When an E-R diagram is mapped to tables, the representation is redundant for
    - a) Weak entity sets
    - b) weak relationship sets
    - c) Strong entity sets
    - d) strong relationship sets
  6. Multiplexing technique that shifts each signal to a different carrier frequency is
    - a) FDM
    - b) TDM
    - c) Both FDM & TDM
    - d) None of the mentioned

7. The practice of obtaining sensitive information such as usernames, passwords and credit card details by disguising as a trustworthy entity in an electronic communication such as emails is known as?
- a) hacking
  - b) cracking
  - c) dumpster diving
  - d) phishing
8. Which tag is used in HTML5 for the initialization of the document type?
- a) <Doctype HTML>
  - b) <!DOCTYPE html>
  - c) <Doctype>
  - d) <\Doctype html>
9. What is the correct way of sending mail in HTML?
- a) <mail ab@b</mail>
  - b) <a href = "ab@b">
  - c) <a href = "mailto: ab@b">
  - d) None of the above
10. A type of parallelism that uses micro architectural techniques is called:
- a) Instructional parallelism
  - b) Bit level parallelism
  - c) Bit based parallelism
  - d) Increasing parallelism
11. The rate at which the problem size needs to be increased to maintain efficiency is called:
- a) Efficiency
  - b) Scalability
  - c) Isoefficiency
  - d) Effectiveness
12. Which of the following statements is true regarding HTTP?
- a) Web browsers use only HTTP as a communication protocol with servers
  - b) It does not maintain any connection information on previous transactions
  - c) It is designed to route information based on content
  - d) It refers to resources using their Universal Resource Identifier (URI)
13. Which of these specifiers would be applied to the constructors only?
- a) Explicit
  - b) Implicit
  - c) Protected
  - d) Public

14. If in case a class is called in the main function directly and has a public member function, then \_\_\_\_\_.
- a) It will lead to the production of an out of memory error
  - b) The program will only give warning
  - c) The program will shut the computer down
  - d) It will lead to the production of an undeclared function error
15. In CISC architecture most of the complex instructions are stored in \_\_\_\_\_
- a) CMOS
  - b) Register
  - c) Transistors
  - d) Diodes
16. Which of the following refers to the problem of finding abstracted patterns (or structures) in the unlabelled data?
- a) Supervised learning
  - b) Unsupervised learning
  - c) Hybrid learning
  - d) Reinforcement learning
17. If a data-item is declared as a protected access specified then it can be accessed:
- a) Anywhere in the program
  - b) By the base and derived classes
  - c) Only by base class
  - d) Only by derived class
18. Dijkstra's algorithm is based on
- a) Divide and conquer paradigm
  - b) Dynamic Programming
  - c) Greedy Approach
  - d) Backtracking paradigm
19. If the disk head is located initially at 32, find the number of disk moves required with FCFS if the disk queues of I/O blocks requests are 98, 37, 14, 124, 65, 67.
- a) 239
  - b) 310
  - c) 321
  - d) 325
20. Basis path testing falls under
- a) System testing
  - b) White box testing
  - c) Black box testing
  - d) Unit testing

21. Which of the following is characteristic of an MIS?
- a) Provides guidance in identifying problems, finding and evaluating alternative solutions, and selecting or comparing alternatives.
  - b) Draws on diverse yet predictable data resources to aggregate and summarize data.
  - c) High volume, data capture focus.
  - d) Has as its goal the efficiency of data movement and processing and interfacing different TPS.
22. Which one of the following set of gates is best suited for 'parity' checking and 'parity' generation?
- a) EX-OR, EX-NOR
  - b) NAND, NOR
  - c) AND, OR, NOT
  - d) None of the above
23. In which one of the following, continuous process improvement is done?
- a) ISO9001
  - b) RMMM
  - c) CMM
  - d) None of the above
24. One weakness of boundary value analysis and equivalence partitioning is
- a) They are not effective.
  - b) They do not explore combinations of input circumstances.
  - c) They explore combinations of input circumstances.
  - d) None of the above.
25. Which of the following concepts means adding new concepts to a program as it runs?
- a) Data hiding
  - b) Dynamic loading
  - c) Dynamic typing
  - d) Dynamic binding
26. A client-server system uses a satellite network, with the satellite at a height of 40,000 kms. What is the best-case delay in response to a request? (Note that the speed of light in air is 3,00,000 km/second).
- a) 133.33 m sec
  - b) 266.67 m sec
  - c) 400.00 m sec
  - d) 533.33 m sec
27. \_\_\_\_\_ is a type of transmission impairment in which the signal loses strength due to the resistance of the transmission medium.
- a) Attenuation
  - b) Distortion
  - c) Noise
  - d) Decibel

28. In \_\_\_\_\_ substitution, a character in the plaintext is always changed to the same character in the cipher text, regardless of its position in the text.
- a) Polyalphabetic
  - b) Monoalphabetic
  - c) Transpositional
  - d) Multialphabetic
29. Repository of information gathered from multiple sources, storing under unified scheme at a single site is called as
- a) Data mining
  - b) Meta data
  - c) Data warehousing
  - d) Database
30. When a mobile telephone physically moves from one to another cell, the base station transfers ownership to the cell getting strongest signal. This process is known as \_\_\_\_\_.
- a) Handoff
  - b) Mobile switching
  - c) Mobile routing
  - d) Cell switching
31. Assuming that the disk head is located initially at 32, find the number of disk moves required with FCFS if the disk queue of I/O block requests are 98, 37, 14, 124, 65, 67:
- a) 310
  - b) 324
  - c) 320
  - d) 321
32. What will be the output of the following code segment?
- ```
main( ) {  
    char s[10];  
    strcpy(s, "abc");  
    printf("%d %d", strlen(s), sizeof(s));  
}
```
- a) 3 10
  - b) 3 3
  - c) 10 3
  - d) 10 10
33. One can make an exact replica of a Binary Search Tree by traversing it in
- a) Inorder
  - b) Preorder
  - c) Postorder
  - d) Any order

34. Hashing collision resolution techniques are
- Huffman coding, linear hashing
  - Bucket addressing, Huffman coding
  - Chaining, Huffman coding
  - Chaining, Bucket addressing
35. A sorting technique which uses the binary tree concept such that label of any node is larger than all the labels in the subtrees, is called
- Selection sort
  - Insertion sort.
  - Heap sort.
  - Quick sort
36. The prefix notation of  $(A+B)*(C-D)/E*F$  is
- $/+-AB*CD.$
  - $/*+-ABCD*EF.$
  - $*/*+AB-CDEF.$
  - $**AB+CD/EF.$
37. Which of the following is **not** a fact-finding technique?
- Third party enquiry
  - Interview
  - Questionnaire
  - Record reviews
38. In system design and development field what does spaghetti code mean?
- programs written in unstructured languages
  - well structured and well documented code
  - program code that has many GOTO statements
  - Both (A) and (C)
39. Cost-Benefit Analysis is performed during
- Analysis phase
  - Design phase
  - Feasibility study phase
  - Implementation phase
40. Some object-oriented systems permit a class to inherit its state(attributes) and behaviors from more than one super class. This is called
- multiple inheritance
  - inheritance
  - hybrid inheritance
  - specialization

41. The testing of software without the knowledge of source code is called
- white box testing
  - black box testing
  - gray box testing
  - glass box testing
42. Cohesion is a qualitative indication of the degree to which a module?
- Can be written more compactly
  - Is connected to other modules and the outside world
  - Is able to complete its function in a timely manner
  - Focuses on just one thing
43. Which of the following schemas does define a view or views of the database for particular users?
- Internal schema
  - Conceptual schema
  - Physical schema
  - External schema
44. The process of managing simultaneous operations on the database without having them interfere with one another is
- Serializability
  - Recoverability
  - Concurrency control
  - Transaction management
45. The referential integrity rule requires that \_\_\_\_\_.
- Every null foreign key value must reference an existing primary key value
  - An attribute have a corresponding value
  - You delete a row in one table whose primary key does not have a matching foreign key value in another table
  - Every non-null foreign key value reference an existing primary key value
46. Suppose that  $A$  is a subset of  $V^*$ . Then the set consisting of concatenations of arbitrarily many strings from  $A$  represented by  $A^*$  is called
- Symmetric closure
  - Reflexive closure
  - Kleene closure
  - Finite closure
47. The bidirectional feedback loop helps link the computer modelling with:
- cognitive science
  - human intelligence
  - heuristic processing
  - artificial science

48. For a speech understanding system to achieve widespread acceptance in the field of office automation, they must have:

- a) isolated word recognition
- b) speaker dependence
- c) speaker independence
- d) All of the above

49. What is a top-down parser?

- a) Begins by hypothesizing a sentence (the symbol S) and successively predicting lower level constituents until individual preterminal symbols are written
- b) Begins by hypothesizing a sentence (the symbol S) and successively predicting upper level constituents until individual preterminal symbols are written
- c) Begins by hypothesizing lower level constituents and successively predicting a sentence (the symbol S)
- d) Begins by hypothesizing upper level constituents and successively predicting a sentence (the symbol S)

50. What is meant by agent's percept sequence?

- a) Used to perceive the environment
- b) complete history of actuator
- c) Complete history of perceived things
- d) none of the mentioned

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## ROUGH WORK

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# ROUGH WORK