



திருவள்ளூர் பல்கலைக்கழகம், வேலூர்
THIRUVALLUVAR UNIVERSITY, VELLORE

Ph.D., - COMMON ENTRANCE TEST (CET9) – JUNE SESSION 2022

Subject : COMPUTER SCIENCE

Exam Date : 26.06.2022

Time : 11.00 A.M. TO 12.30. P.M

Maximum Marks : 50

NAME		REGISTER NO	
		HALL TICKET NO.	
MOBILE NO		EMAIL ID	
CANDIDATE SIGNATURE		HALL INVEGILATOR SIGNATURE WITH DATE	

SECTION – A (50 x 1 = 50 Marks)

All Questions carry equal marks

- The access method used for magnetic tape is _____.
a) Direct b) Random c) Sequential d) None of the above
- The 2's complement of $(1000)_2$ is _____.
a) 0111 b) 0101 c) 1000 d) 0001
- The address bus flow in _____.
a) bidirection b) unidirection c) mulidirection d) Circular
- Status register is also called as _____.
a) Accumulator b) Stack c) Counter d) Flags
- The Octal number system has base _____.
a) 2 b) 10 c) 8 d) 10
- A Register is a group of _____.
a) OR gates b) OR & AND gate c) Flip-flops d) None of the above
- Each Flip-flop stores _____.
a) 1 bit b) 8 bits c) 16 bits d) 2 bits
- In Boolean algebra, $A + A =$ _____.
a) A b) 1 c) 0 d) None of these
- What will be the decimal equivalent of $(111011.101)_2$.
a) 48.625 b) 59.487 c) 48.487 d) 59.625
- A XOR gate has inputs A and B, and the output Y. Then the output equation is _____.
a) $Y = AB$ b) $Y = AB + A'B$ c) $Y = A'B + AB'$ d) $Y = AB + A'B'$
- What is the value of the postfix expression 6 3 2 4 + - *?
a) 1 b) 40 c) 74 d) -18

12. A data structure in which elements can be inserted or deleted at/from both ends but not in the middle is?
- a) Queue b) Circular queue c) Deque d) Priority queue
13. What will be the height of a balanced full binary tree with 8 leaves?
- a) 8 b) 5 c) 6 d) 4
14. A graph with all vertices having equal degree is known as a _____ Graph.
- a) Multi b) Regular c) Simple d) Complete
15. In _____ search, the search starts at the beginning of the list and check every element in the list.
- a) Linear b) Binary c) Hash d) Binary tree
16. What is the worst case complexity of Merge sort?
- a) $O(N \log N)$ b) $N*N$ c) $O(\log N)$ d) $O(\log(\log N))$
17. Which algorithm strategy builds up a solution by choosing the option that looks the best at every step.
- a) Greedy method b) Branch and bound method
c) Dynamic programming d) Divide and conquer
18. _____ enumerates a list of promising nodes that could be computed to give the possible solutions of a given problem.
- a) Exhaustive search b) Brute force
c) Backtracking d) Divide and conquer
19. Dijkstra's algorithm is used to solve _____ problems?
- a) Network lock b) Single source shortest path
c) All pair shortest path d) Sorting
20. Two main measures for finding efficiency of an algorithm are _____.
- a) Time and space complexity b) Data and space rate
c) Processor and memory speed d) Complexity and capacity
21. In which of the following formats data is stored in the database management system?
- a) Image b) Text c) Table d) Graph
22. The ability to query data, as well as insert, delete, and alter tuples, is offered by _____.
- a) TCL (Transaction Control Language) b) DCL (Data Control Language)
c) DDL (Data Definition Language) d) DML (Data Manipulation Language)
23. _____ is a set of one or more attributes taken collectively to uniquely identify a record.
- a) Primary Key b) Foreign key c) Super key d) Candidate key
24. Which command is used to remove a relation from an SQL?
- a) Delete b) Purge c) Drop table d) Remove
25. In the _____ normal form, a composite attribute is converted to individual attributes.
- a) First b) Second c) Third d) Fourth
26. Execution of two or more programs by a single CPU is known as _____.
- a) Multiprocessing b) Time sharing
c) Multiprogramming d) None of the above

27. A process which is copied from main memory to secondary memory on the basis of requirement is known as _____.
- a) Demand paging b) Paging c) Threads d) Segmentation
28. A systematic procedure for moving the CPU to new process is known as _____.
- a) Synchronization b) Deadlock c) Starvation d) Context Switching
29. To access the services of operating system, the interface is provided by _____.
- a) System Calls b) API c) Library d) Assembly Instructions
30. Which command is used for printing the current working directory?
- a) dir b) HOME c) cd d) pwd
31. _____ layer provides service to the user.
- a) Session b) Application c) Presentation d) Physical
32. What is a HUB?
- a) Software b) Computing device c) Network device d) Calculating device
33. Identify the protocol primarily used for browsing data.
- a) FTP b) TCP c) TFTP d) HTTP
34. Identify the incorrect network topology,
- a) Bus b) Star c) P2P d) Ring
35. Identify among the following the network device used to connect two dissimilar types of networks.
- a) Switch b) Hub c) Bridge d) Gateway
36. Which model is popular for students small projects ?
- a) Waterfall Model b) Spiral Model
c) Quick and Fix model d) Prototyping Model
37. The relationship of data elements in a module is called _____.
- a) Coupling b) Modularity c) Cohesion d) Granularity
38. What type of software testing is generally used in Software Maintenance?
- a) Regression Testing b) System Testing c) Integration Testing d) Unit testing
39. Which model can be selected if user is involved in all the phases of SDLC?
- a) Waterfall Model b) Prototyping Model
c) RAD Model d) Both Prototyping Model & RAD Model
40. _____ is an “umbrella” activity that is applied throughout the software engineering process.
- a) Debugging b) Testing c) Designing d) Software quality assurance
41. Which of the following is an exit controlled loop?
- a) While loop b) For loop c) do-while loop d) None of the above
42. What is the size of the ‘int’ data type (in bytes) in C?
- a) 4 b) 8 c) 2 d) 1
43. The C++ code which causes abnormal termination/behaviour of a program should be written under _____ block.
- a) catch b) try c) throw d) finally

44. Which concept allows you to reuse the written code in C++?

- a) **Inheritance** b) Polymorphism c) Abstraction d) Encapsulation

45. In java, what makes the Java platform independent?

- a) Advanced programming language **b) It uses byte code for execution**
c) Class compilation d) All of these

46. Which of the following is defined as the process of elimination of parts of a scene outside a window or a viewport?

- a) editing b) cutting c) plucking **d) clipping**

47. Which of the following operations can be used to zoom in or out around any axis on a three-dimensional object from its original position?

- a) Rotation b) Shearing **c) Scaling** d) Translation

48. The primary output device in a graphic system is _____.

- a) Scanner **b) Video monitor** c) Plotter d) Printer

49. The combination of text, graphics art, sound, animation and video delivered by computer or other electronic devices is called _____.

- a) Multimedia** b) Hyper media c) Visual media d) None of the above

50. Consider the grammar G,

$S \rightarrow AB;$ $A \rightarrow aa \mid ab \mid ba \mid bb;$ $B \rightarrow aBa \mid bBb \mid C;$ $C \rightarrow aa \mid ab \mid ba \mid bb;$

which of the following string is generated by G?

- a) abaab **b) bababbab** c) aaabbbba d) babaa