Computer Applications

1. In c the key word used to transfer control from function back to the main program is
   a) Switch
   b) Break
   c) Return
   d) Goto

2. In SQL how do you select a column named "Roll No" from a table named Student.
   a) SELECT Student.RollNo
   b) SELECT RollNo FROM Student
   c) Either A or B can be used
   d) None of these

3. Database applications were built directly on top of file system to overcome the following drawbacks of using file systems
   a) Data redundancy and inconsistency
   b) Difficulty in accessing data
   c) Data isolation
   d) a, b and c

4. For a complete graph with N vertices, the total number of spanning trees is given by
   a) $N^{(N-2)}$
   b) $2N^{(N-1)}$
   c) $N^{(N-1)}$
   d) none of these

5. The NAND ''RS'' flip flop sets the output (drives out ''1'') when the inputs are
   a) R=1, S=1
   b) R=0, S=0
   c) R=0, S=1
   d) R=1, S=0

6. The most commonly used code for processing positive and negative binary numbers
   a) Gray code
   b) 2421 code
   c) 2's complement
   d) BCD code

7. A hash function f defined as f(key) = key mod 7 with linear probing used to resolve collisions. Insert the keys 37,39,72,48,98 and 11 into the table indexed from 0 to 6. What will be the location of 11?
   a) 4
   b) 5
   c) 6
   d) 7

8. If number of keys of any node in B-tree of order m becomes m, then
   a) Split operation is applied
   b) Merge operation is applied
   c) No such operation is required
   d) Both merge and split are applied

9. Which system program resolves all the address references in the program
   a) loader
   b) compiler
   c) linker
   d) none of above

10. During compilation which of the following analyzer reads the character in the source program and groups them into logically cohesive sequence of characters called tokens
   a) syntax analysis
   b) lexical analysis
   c) semantic analysis
   d) none of above

11. Paging technique which requires all the pages of the job to be in the memory
   a) demand paging
   b) simple paged allocation technique
   c) both the above
   d) non of the above

12. Banker's algorithm is used for _____ purpose
   a) Deadlock avoidance
   b) Deadlock prevention
   c) Deadlock removal
   d) None of these

13. In electronic mail, which of the following protocols allows the transfer of multimedia messages?
   a) IMAP
   b) SMTP
   c) POP3
   d) MIME

14. In a hash table the dictionary operations require
   a) $O(1)$ time on average
   b) $O(n)$ time on average
   c) $O(n^2)$ time on average
   d) $O(nlogn)$ time on average.

15. Which one of the following is false
   a) Finite automation has finite memory
   b) A regular expression is built using four Kleene operators
   c) The conversion from NFA to DFA is the subset construction
   d) None of these

16. Consider the grammar $S \rightarrow SS \mid SSS \mid x$. How many derivation trees are there for xxxx?
   a) 20
   b) 15
   c) 10
   d) None of these

17. In raster displays picture definition is stored in a memory called

a) refresh buffer
b) frame buffer
c) register buffer
d) both a and b

18. Refreshing in raster-scan displays is normally carried out at the rate of
    a) 30 Hz
    b) 60 Hz
    c) 90 Hz
    d) 120 Hz

19. _____ data structures have the strongest height guarantee?
    a) B-tree of order 3
    b) B-tree of order 5
    c) B+ tree of order 3
    d) 2-3 tree

20. The technique that does not use recursion
    a) divide and conquer
    b) dynamic programming
    c) Both a and b
    d) none of these

21. The total number of comparisons made in quick sort for sorting a file of size n, is
    a) O(log n)
    b) O(n)
    c) O(n log n)
    d) None of the above

22. Which of the following algorithm design technique is used in the quick sort algorithm?
    a) Dynamic programming
    b) Backtracking
    c) Divide and Conquer
    d) Greedy method

23. _____ is not required in Software Requirement Specifications (SRS) document?
    a) Functional Requirements and Non-Functional Requirements
    b) Implementation goals
    c) Algorithms for Software Implementation
    d) None of these

24. In a software life cycle structural and behavioral modeling comes under
    a) Requirements Capture
    b) Design
    c) Implementation
    d) Maintenance

25. Opcode is a machine instruction obtained from decoding instruction stored in
    a) Stack register
    b) Instruction register

c) Address register

d) None of these

26. _____ is a type of microprocessor with limited set of instructions
   a) RISC
   b) CISC
   c) ALU
   d) CPU

27. _____ enables distributed computing among networked computers on different platforms so that they together perform same as a single power full machine
   a) Parallel virtual machine
   b) Distributed virtual machine
   c) Heterogeneous virtual machine
   d) All of these

28. A mobile node needs a _____ to participate in a multicast group
   a) forward tunnel
   b) reverse tunnel
   c) IP-in-IP tunnel
   d) none

29. A good place for segmenting the connection between mobile host and correspondent host is at the _____ agent.
   a) home
   b) foreign
   c) either home or foreign
   d) none

30. Which of the following is not a data mining method?
   a) Dependency analysis.
   b) A priori algorithms.
   c) Classification and prediction.
   d) Data description.

31. One of the most frequently used data mining algorithms is:
   a) Decision trees.
   b) Outlier analysis.
   c) Cluster analysis.
   d) Evolution analysis.

32. In UNIX _____ works as a command interpreter.
   a) Kernel
   b) Vi editor
   c) Shell
   d) None of these

33. The separation of compiler into lexical analysis and parsing phase leads to
   a) Increase in design complexity

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b) Decrease in time complexity
c) Increase in time complexity
d) Both A and C

34. Which normal form is considered adequate for relational database design
   a) 2NF
   b) 3NF
   c) 4NF
   d) None of these

35. Which of the following is hardware interrupts?
   a) RST7.5
   b) INTR
   c) TRAP
   d) All of these

36. Kerberos is an encryption-based system that uses
   a) Secret key encryption
   b) Public key encryption
   c) Data key encryption
   d) None of these

37. Artificial intelligence uses _____ to represent knowledge
   a) Facts
   b) Symbols
   c) Facts and Symbols
   d) None of these

38. _____ is an AI programming language that solves a problem with symbolic logic.
   a) JAVA
   b) PROLOG
   c) MATLAB
   d) All of these

39. In _____, each packet is treated independently of all others.
   a) Circuit switching
   b) Datagram switching
   c) Frame switching
   d) None of the above

40. _____ are used for cellular phone, satellite, and wireless LAN communications.
   a) Radio waves
   b) Infrared waves
   c) Microwaves
   d) none of the above

Computer Application

Key

Question No.	Correct Answer
1	C
2	B
3	D
4	A
5	D
6	C
7	B
8	A
9	C
10	B
11	A
12	A
13	D
14	A
15	B
16	C
17	D
18	B
19	B
20	B
21	C
22	C
23	C
24	B
25	B
26	A
27	A
28	B
29	B
30	B
31	A
32	C
33	B
34	B
35	D
36	A
37	C
38	B
39	B
40	C