Computer Science and Applications

PAPER—II

Note : This paper contains fifty (50) objective-type questions, each question carrying two (2) marks. Attempt all of them.

1. T is a graph with n vertices. T is connected and has exactly n-1 edges, then :
   (A) T is a tree
   (B) T contains no cycles
   (C) Every pairs of vertices in T is connected by exactly one path
   (D) All of these

2. If the proposition $7P \Rightarrow Q$ is true, then the truth value of the proportion $7PV(P \Rightarrow Q)$ is :
   (A) True (B) Multi - Valued
   (C) Flase (D) Can not determined

3. Let A and B be two arbitrary events, then :
   (A) $P(A \cap B) = P(A)\ P(B)$ (B) $P(P \cup B) = P(A) + P(B)$
   (C) $P(A \cup B) \leq P(A) + P(B)$ (D) $P(A/B) = P(A \cap B) + P(B)$

4. Which sentence can be generated by $S \rightarrow d/bA$, $A \rightarrow d/ccA$:
   (A) bccddd (B) aabccd (C) ababccd (D) abbbd

5. Regular expression $a^* + b$ denotes the set :
   (A) {a} (B) {ϵ, a, b} (C) {a, b} (D) None of these

6. Which of the following is divisible by 4 ?
   (A) 100101100 (B) 1110001110001
   (C) 11110011 (D) 10101010101010

7. A half-adder is also known as :
   (A) AND Circuit (B) NAND Circuit
   (C) NOR Circuit (D) EX-OR Circuit

8. Consider the following sequence of instructions :

$a = a \oplus b$, $b = a \oplus b$, $a = b \oplus a$ This Sequence

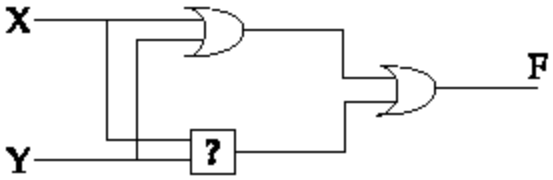
(A) retains the value of the a and b

(B) complements the value of a and b

(C) swap a and b

(D) negates values of a and b

9. Consider the following circuit :



to make it a Tautology the [?] should be :

(A) NAND gate (B) AND gate (C) OR gate (D) EX-OR gate

10. When an inventor is placed between both inputs of an S-R flip flop, the resulting flip flop is :

(A) JK flip-flop (B) D-flip-flop

(C) T flip-flop (D) None of these

11. What is the output of the following C-program main () :

{print f("%d%d%d", size of (3.14f), size of (3.14), size of (3.141));}

(A) 4 4 4 (B) 4 8 10 (C) 8 4 8 (D) 8 8 8

12. The bitwise OR of 35 with 7 in C will be :

(A) 35 (B) 7 (C) 42 (D) 39

13. Data members and member function of a class by default is repectively :

(A) private and public (B) public

(C) public and private (D) private

14. Function over loading done at :

(A) Runtime (B) Compile time

(C) Linking time (D) Switching from function to function

15. What will be the value of i for the following expression :

int $i=11$, $i=3$;

$i+=(f>3)\ ?\ i\ \&\ 2:5$;

(A) 2 (B) 5 (C) 13 (D) 12

16. A schema describes :

(A) data elements (B) records and files

(C) record relationship (D) all of the above

17. One approach to standarolizing storing of data :

(A) MIS (B) CODASYL

(C) Structured Programing (D) None of the above

18. In a relational schema, each tuple is divided in fields called :

(A) Relations (B) Domains (C) Queries (D) All the above

19. An embedded printer provides :

(A) Physical record key (B) An inserted Index

(C) A secondary access path (D) All the above

20. A locked file can be :

(A) accessed by only one user

(B) modified by users with the correct possword

(C) is used to hide sensitive imformation

(D) both (B) and (C)

21. In what tree, for every node the height of its left subtree and right subtree differ at least by one :

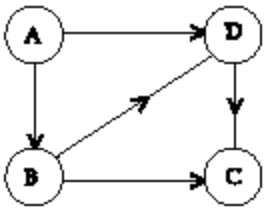
(A) Binary search tree (B) AVL - tree

(C) Threaded binary tree (D) Complete tree

22. A hash function f defined as $f(\text{key}) = \text{key mod } 7$, with linear probing it is used to insert the key 37,38,72,48,98,11,56 into a table index from 0 to 6. What will be the locations of 11 :

(A) 3 (B) 4 (C) 5 (D) 6

23. Consider the graph, which of the following is a valid topological sorting ?



(A) ABCD (B) BACD (C) BADC (D) ABDC

24. The initial configuration of quaue is a, b, c, d. 'a' is at the front. To get the configuration d, c, b, a how many deletions and additions required :

(A) 2 deletions, 3 additions (B) 3 deletions, 2 additions
(C) 3 deletions, 4 additions (D) 3 deletions, 3 additions

25. Which traversal techniques lists the nodes of a binary search tree in ascending order ?

(A) post - order (B) in - order
(C) pre - order (D) linear - order

26. The data unit in the TCP/IP application Layer is called a _____ .

(A) message (B) segment (C) datagram (D) frame

27. Which of following file retrieval methods use hypermedia ?

(A) HTML (B) Veronica (C) WAIS (D) HTTP

28. Which of following is an example of a client - server model :

(A) DNS (B) FTP (C) TELNET (D) All the above

29. _____ provide a method to recover data that has been delivered but not get used :

(A) Segmentation (B) Concatenation
(C) Transalation (D) Synchronization

30. Encryption and decryption are the functions of the _____ layer of OSI model :

(A) transport (B) session (C) router (D) presentation

31. The Register or main memory location which contains the effective address of the operand is known as :

(A) Pointer (B) Indexed register
(C) Special Locations (D) Scratch Pad

32. A Top - down Parse generates :
(A) Left most derivation
(B) Right - most derivation
(C) Right - most derivation in reverse
(D) Left - most derivation in reverse

33. A general macroprocessor is an in built function of :
(A) Loader (B) Linker (C) Editor (D) Assembler

34. Which of the following is not collision Resolution Technique :
(A) Hash addressing
(B) Chainning
(C) Indexing
(D) None of these

35. Which activities is not included in the first pass of two pass assembler ?
(A) build the symbol table
(B) construct the Intermediate code
(C) separate memonic opcode and operand field.
(D) none of these

36. Producer consumer problem can be solved using :
(A) semaphores
(B) event counters
(C) monitors
(D) all the above

37. If you want to execute more than one program at a time, the systems software that are used must be capable of :
(A) word processing
(B) virtual memory
(C) compiling
(D) multitasking

38. Which of the following checks cannot be carried out on the input data to a system ?
(A) Consistency check
(B) Syntax check
(C) Range check
(D) All the above

39. Nonmodifiable procedures are called :
(A) Serially usable procedure
(B) Concurrent procedure
(C) Reentrant procedure
(D) Topdown procedure

40. Banker's algorithm is used for _____ purpose :
(A) Deadlock avoidance
(B) Deadlock removal
(C) Deadlock prevention
(D) Deadlock continuations

41. The testing of software against SRS is called :
(A) Acceptance testing
(B) Integration testing
(C) Regression testing
(D) Series testing

42. The lower degree of cohesion is :

(A) logical cohesion (B) coincidential cohesion

(C) procedural cohesion (D) communicational cohesion

43. The Reliability of the software is directly dependent upon :

(A) Quality of the design (B) Programmer's experience

(C) Number of error (D) Set of user requirements

44. Succesive layer of design in software using but ton-up design is called :

(A) Layer of Definement (B) Layer of Construction

(C) Layer of abstraction (D) None of the above

45. Sliding window concept of software project management is :

(A) Preperation of comprehenciable plan

(B) Preperation of the various stages of development

(C) Ad-hoc planning

(D) Requirement analysis

46. Which of the following transonission media is used in Blue tooth Technology :

(A) Radio links (B) Microwave links

(C) VSAT Communication (D) Fiber - optic

47. Which of the following is a EDI standard ?

(A) ANSI X.15 (B) ANSI X.14 (C) ANSI X.13 (D) ANSI X.12

48. Analysis of large database to retrive information is called :

(A) OLTP (B) OLAP (C) OLDP (D) TLPP

49. The cost of the network is usually determined by :

(A) Time complexity (B) Switching complexity

(C) Circuit complexity (D) None of these

50. The mechanism with which several uses can share a medium without interference is :

(A) Frequency modulation (B) Amplitude modulation

(C) Multiplexing (D) None of these

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