1. If she is my friend and you are her friend, then we are friends. Given this, the friend relationship in this context is _____.

(i) Commutative (ii) transitive (iii) implicative (iv) equivalence

(A) (i) and (ii) (B) (iii) (C) (i),(ii),(iii) and (iv) (D) None of these

Ans:- D

2. Circle has _____

(A) No vertices (B) only 1 vertex (C) vertices (D) None of these

Ans :- A

8. The highest noise margin is offered by

(A) BICMOS (B) TTL (C) ECL (D) CMOS

Ans:- B

9. The answer of the operation $(10111)2 * (1110)2$ in hex equivalence is

(A) 150 (B) 241 (C) 142 (D) 101011110

Ans:- C

10. How many '1' are present in the binary representation of

$3 X 512 + 7 X 64 + 5 X 8 + 3$

(A) 8 (B) 9 (C) 10 (D) 11

Ans:- B

11. Recursive functions are executed in a

(A) First in first out order (B) Last in first out order

(C) Parallel fashion (D) Load Balancing

Ans: B

12. What would be the output of the following program, if run from the commandline as "myprog 1 2 3"?

```
main(int argc,char *argv[])
{
int i;
i=argv[1]+argv[2]+argv[3];
printf("%d",i);
}
```

(A) 123 (B) 6 (C) Error (D) "123"

Ans:- C

13. A _____ is a special method used to initialize the instance variable of a class.

(A) Member function (B) Destructor (C) Constructor (D) structure

Ans:- C

14. Encapsulation is

(A) Dynamic binding

(B) A mechanism to associate the code and data

(C) Data abstraction

(D) Creating new class

Ans:- B

15. Which of the statements are true?

I. Function overloading is done at compile time.

II. Protected members are accessible to the member of a derived class.

III. A derived class inherits constructors and destructors

IV. A friend function can be called like a normal function.

V. Nested class is a derived class.

(A) I,II,III (B) II,III,V (C) III,IV,V (D) I,II,IV

Ans:- D

16. The E-R model is expressed in terms of

I. Entities

II. The relationship among entitites

III. The attributes of the entities.

IV. Functional relationship.

(A) I,II (B) I,II, IV (C) II,II,IV (D) I,II,IV

Ans:- D

17. Specialization is _____ process.

(A) top-down (B) bottom up

(C) both (A) and (B) (D) none of these

Ans:- A

18. Match the following:

(1) Determinants (a) No attributes

(2) Candidate key (b) Uniquely identified a row

(3) Non-redundancy (c) A constraint between two attributes

(4) Functional dependency (d) Group of attributes on the left hand side of arrow

of function dependency

(A) 1 – d, 2 – b, 3 – a, 4 – c

(B) 2 – d, 3 – a, 1- b, 4 – c

(C) 4 – a, 3 – b, 2 – c, 1 – d

(D) 3 – a, 4 – b, 1 – c, 2 – d

Ans:- A.

19. A function that has no partial functional dependencies is in _____ form.

(A) 3 NF (B) 2 NF (C) 4 NF (D) BCNF

Ans:- B

20. Which of the following statement is wrong?

I. 2-phase locking protocol suffer from dead lock.

II. Time stamp protocol suffer from more aborts.

III. A block hole in a DFD is a data store with only inbound flows.

IV. Multivalued dependency among attribute is checked at 3 NF level.

V. An entity-relationship diagram is a tool to represent event model.

(A) I ,II,III (B) II,III,IV (C) III,IV,V (D) II,IV,V

Ans:- A

21. If the number of leaves in a strictly binary tree is an odd number, then what can you say with full conviction about total number of nodes in a tree?

(A) It is an odd number.

(B) It is an even number.

(C) It cannot be equal to the number of leaves.

(D) It is always greater than twice the number of leaves.

Ans:- A. Strictly binary tree with N leaves contains 2N-1 nodes. So when the number of leaves is odd number then the total number of nodes in the tree also will be odd if we apply the above formula.

22. The number of edges in a complete graph of n vertices is

(A) n (B) n(n-1)/2 (C) n(n+1)/2 (D) n2/2

Ans:- B. The complete graph on n vertices has n(n-1)/2 edges.

23. At a hill station, the parking lot is one long drive way snaking up a hill side. Cars drive in and

park right behind the car in front of them, one behind another. A car can't leave until all the cars in front of it have left. Is the parking lot more like

(A) An array (B) A stack (C) A queue (D) A linked list

Ans:- C.

24. With regard to linked list, which of the following statement is false ?

(A) An algorithm to search for an element in a singly linked list requires $O(n)$ operations in the worst case.

(B) An algorithm for deleting the first element in a singly linked list requires $o(n)$ operations in the worst case.

(C). An algorithm for finding the maximum value in a circular linked list requires $o(n)$ operations.

(D). An algorithm for deleting the middle node of a circular linked list requires $o(n)$ operations.

Ans:- B

25. A hash function f defined as f(key)=key mod 7, with linear probing used to resolve collisions. Insert the keys 37,38,72,48,98 and 11 into the table indexed from 0 to 6. What will be the location of 11?

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

Ans:- C

26. Device on one network can communicate with devices on another network via a

(A) Hub/switch (B) Utility server

(C) File server (D) Gateway

Ans:- D

27. What is the maximum window size in sliding window protocol used in a computer network?

(A) 4 (B) 8 (C) 15 (D) 16

Ans:- A

28. Which of the following are Data Link Layer standard?

1. Ethernet 2. HSSI 3. Frame Relay

4. 10-Base T 5. Token Ring

(A) 1,2,3 (B) 1,3,5 (C) 1,3,4,5 (D) 1,2,3,4,5

Ans:- C

29. In case of Bus/Tree topology signal balancing issue is overcome by

(A) Modulation (B) Polling

(C) Segmentation (D) Strong transmitter

Ans:- C

30. Match the following:

(i) Ethernet (a) Deterministic

(ii) Token Ring (b) Utilize the full wire speed

(iii) Cut-through switch (c) Prevent Looping

(iv) Spanning tree (d) Checking valid address

Codes:

(A) i-d,ii-a,iii-b,iv-c (B) i-a,ii-d,iii-b,iv-c

(C) i-d,ii-d,iii-c,iv-b (D) i-d,ii-c,iii-b,iv-a

Ans:- A

31. In an absolute loading scheme which loader function is accomplished by assembler?

(A) re-allocation (B) allocation (C) linking (D) loading

Ans:- A. Implementation of Absolute loader: The four loader functions are performed as following:

1.Allocation- By programmer 2.Linking- By programmer 3.Relocation- By assembler 4.Loading- By loader

32. Which of the following grammar is LR(1)?

(A) A->aAb, A->bAb,A->a,A->b

(B) A->aAa,A->aAb,A->c

(C) A->A+A,A->a

(D)Both (A) and (B)

33. A shift-reduce parser carries out the actions specified within braces immediately after reducing with the corresponding rule of the grammar.

S->xxW[print "1"]

S->y [print "2"]

W->S2 [print "3" }, what is the translation of "x x x x y z z"?

(A) 1 1 2 3 1 (B) 1 1 2 3 3 (C) 2 3 1 3 1 (D) 2 3 3 2 1

Ans:- C

34. Context-free Grammar(CFG) can be recognized by

(A) Finite state automata

(B) 2-way linear bounded automata

(C) push down automata

(D) Both (B) and (C)

Ans:- D

35. Synthesized attribute can be easily simulated by a

(A) LL grammar (B) Ambiguous grammar

(C) LR grammar (D) None of the above

Ans:- C

36. In the process management Round-robin method is essentially the pre-emptive version of

_____.

(A) FILO (B) FIFO

(C) SSF (D) Longest time first

Ans:- B

37. A page fault

(A) is an error specific page

(B) is an access to the page not currently in memory

(C) occur when a page program occur in a page memory.

(D) page used in the previous page reference.

Ans:- B

38. A semaphore count of negative n means (s=-n) that the queue contains ___n_____ waiting

processes.

(A) n + 1 (B) n (C) n – 1 (D) 0

Ans:- B

39. A program is located in the smallest available hole in the memory is _____

(A) best-fit (B) first-bit (C) worst-fit (D) buddy

Ans:- A

40. The unix command used to find out the number of characters in a file is

(A) nc (B) wc (C) chcnt (D) lc

Ans:- B

41. Software Engineering is a discipline that integrates _____ for the development of computer

software.

(A) Process (B) Methods (C) Tools (D) All

Ans:- D

42. Any error whose cause cannot be identified anywhere within the software system is called

_____.

(A) Internal error (B) External error

(C) Inherent error (D) Logic error

Ans:- B

43. Recorded software attributes can be used in the following endeavours:

(i) Cost and schedule estimates.

(ii) Software product reliability predictions

(iii)Managing development process

(iv). No where

Codes:

(A) (i) (ii) (iv)

(B) (ii) (iii) (iv)

(C) (i) (ii) (iii)

(D) (i) (ii) (iii) (iv)

Ans :- C

44. Black box testing is done

(A) To show that s/w is operational at its interfaces i.e. input and output.

(B) To examine internal details of code

(C) At client side

(D) None of the above

Ans:- A

45. The name of the transaction file shall be provided by the operator and the file that contains the edited transactions ready for execution shall be called

(A) Batch.exe (B) Trans.exe (C) Opt.exe (D) Edit.exe

Ans:- C

46. The single stage network is also called

(A) One sided network (B) two sided network (C) recirculating network

(E) pipeline network

Ans:- C. The single stage network is also called a recirculating network.

47. Analysis of large database to retrieve information is called

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

Ans:- B

48. Which technology is sometime referred to as wireless cable?

(A) MMDS (B) ATM (C) LMDS (D) CDMA

Ans:- A. MMDS stands for multipoint multichannel distribution system. MMDS is a broadband wireless technology.

49. Another name of IEEE 802.11 a is _____

(A) Wi-Max (B) Fast Ethernet (C) Wi-fi (D) 802.11 g

Ans:- C. IEEE 802.11 standards provide the basis for Wi-fi networks.

50. The unlicensed National Information Infrastructure band operates at the _____frequency

(A) 2.4 GHz (B) 5 GHz (C) 33 MHz (D) 5 MHz

Ans:- B