

145/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. SCSI stands for :

 - (A) Small Computer Systems Interface
 - (B) Simple Component Systems Interface
 - (C) Simple Computer Systems Interface
 - (D) Small Component Systems Interface

2. Which of the following is a logical extension of multiprogramming?

 - (A) Multi processing
 - (B) Multitasking
 - (C) Real time processing
 - (D) Distributed processing

3. Which among the following is not an example of a Java wrapper class?

 - (A) Char
 - (B) Integer
 - (C) Boolean
 - (D) Byte

4. Which one of the following is not an ACID property?

 - (A) Atomicity
 - (B) Consistency
 - (C) Isolation
 - (D) Dependency Preservation

5. Which among the following sorting method is also known as Bucket sorting?

 - (A) Radix sort
 - (B) Heap sort
 - (C) Merge sort
 - (D) Quick sort

6. Which one of the following key is called the minimal super key?

 - (A) Candidate key
 - (B) Super key
 - (C) Primary key
 - (D) None

7. A relation schema R is in _____, if whenever a nontrivial functional dependency $X \rightarrow A$ holds in R , then X is a super key of R .

 - (A) 3NF
 - (B) BCNF
 - (C) 4NF
 - (D) 5NF

8. The maximum number of relationship instances that an entity can participate in, can be specified by :

 - (A) Degree
 - (B) Cardinality ratio
 - (C) Participation constraint
 - (D) Dependency constraint

9. The time required to insert an element in a stack with linked implementation is :
(A) $O(1)$ (B) $O(n)$
(C) $O(\log_2 n)$ (D) $O(n \log_2 n)$

10. FPI stands for :
(A) Faults per inch (B) Frames per inch
(C) Figure per inch (D) Film per inch

11. A binary search tree is generated by inserting the following integers in order
50, 15, 62, 5, 20, 58, 91, 3, 8, 37, 60, 24
The number of nodes in the left sub tree and right sub tree of the root respectively is :
(A) (4, 7) (B) (7, 4)
(C) (8, 3) (D) (3, 8)

12. What is the postfix form of the following expression :
$$A + (B * C - (D / E ^ F) * G) * H$$

(A) ABC*DEF ^ / G* - H*+ (B) ABC*DEF^ / G - *H*+
(C) ABC*DEF / ^ G*-H*+ (D) ABC*DEF / ^ G- *H*+

13. The maximum throughput Smax for pure ALOHA is :
(A) .368 (B) .186
(C) .184 (D) .364

14. An array element is accessed using :
(A) a first in first out approach (B) the dot operator
(C) a member name (D) an index number

15. What is the minimum number of edges which must be removed from a complete bipartite graph of six nodes $K(6)$, so that the remaining graph is planar?
(A) 3 (B) 4
(C) 5 (D) 6

16. If x is an array of integer, then the value of $\&x[i]$ is same as :
(A) $x+i$ (B) $x+\text{sizeof(int)}*i$
(C) $\&x[i-1]+\text{sizeof(int)}$ (D) None of these

17. The best normal form of the relation schema $R(A, B, C, D)$ along with set of functional dependencies $F = \{ AB \rightarrow C, AB \rightarrow D, C \rightarrow A, D \rightarrow B \}$ is :
(A) First Normal Form (B) Second Normal Form
(C) Third Normal Form (D) Boyce Codd Normal Form

32. The mechanism which allows multiple senders to transmit multiple groups of receivers, permits individual receivers to switch channels freely and optimizes bandwidth use while at the same time eliminating congestion :
- (A) Resource Reservation Protocol (B) Load Shedding
 (C) Admission Control (D) Jitter Control
33. The wait() and notify() methods in Java comes under the class :
- (A) java.lang.Thread (B) java.lang.Object
 (C) java.lang.Runnable (D) None of these
34. Which method is used for garbage collection in java?
- (A) finally() (B) final()
 (C) finalize() (D) none of these
35. Good software attributes are :
- (A) High Cohesion Low Coupling (B) Low Cohesion High Coupling
 (C) Low Cohesion Low Coupling (D) High Cohesion High Coupling
36. The fourth level of Capability Maturity Model is :
- (A) Repeatable (B) Defined
 (C) Managed (D) Optimizing
37. The installation approach in which totally removing the old manual or computerized system and putting the new system in use :
- (A) Parallel run (B) Phased approach
 (C) Pilot installation (D) None of these
38. Spiral model comes under the process model :
- (A) Prototype Model (B) Iterative Model
 (C) Formal Model (D) Component Assembly Model
39. If $P(A)$ and $P(B)$ are the probabilities of A and B , then Baye's theorem can be stated as :
- (A) $P(A | B) = \frac{P(B | A)P(B)}{P(A)}$ (B) $P(A | B) = \frac{P(B | A)P(A)}{P(B)}$
 (C) $P(A | B) = \frac{P(B | A)}{P(B)}$ (D) $P(A | B) = \frac{P(B | A)}{P(A)}$

40. Which of the following statements is FALSE?

- (A) $(P \wedge Q) \vee (\sim P \wedge Q) \vee (P \wedge \sim Q)$ is equal to $\sim Q \wedge \sim P$
- (B) $(P \wedge Q) \vee (\sim P \wedge Q) \vee (P \wedge \sim Q)$ is equal to $Q \vee P$
- (C) $(P \wedge Q) \vee (\sim P \wedge Q) \vee (P \wedge \sim Q)$ is equal to $Q \vee (P \wedge \sim Q)$
- (D) $(P \wedge Q) \vee (\sim P \wedge Q) \vee (P \wedge Q)$ is equal to $[(P \vee \sim P) \wedge Q] \vee (P \wedge Q)$

41. SignalR is a library which provides the facility of real time web functionality to :

- (A) Java Applications
- (B) PHP Applications
- (C) ASP .NET Applications
- (D) None of these

42. JSP is a technology for developing web pages that support dynamic content which helps developers insert Java code in HTML pages by making use of special JSP tags, most of which :

- (A) start with <% and end with %>.
- (B) start with <and end with />.
- (C) start with <? and end with ?>.
- (D) None of these

43. Which of the following is the correct syntax in CSS?

- (A) list-style-image: url("sqpurple.gif");
- (B) list-style-image= url('sqpurple.gif');
- (C) list-style-image- url('sqpurple.gif');
- (D) list-style-image: url('sqpurple.gif');

44. The method(s) which returns the index of a specified text in a string in Java script is :

- (A) search() only
- (B) indexOf() only
- (C) both search() and indexOf()
- (D) substring()

45. AJAX is based on internet standards, and uses a combination of :

- (A) XMLHttpRequest object, JavaScript, JQuery, XML
- (B) XMLHttpRequest object, JavaScript, CSS , XML
- (C) XMLHttpRequest object, JavaScript, Silverlight, XML
- (D) None of these

46. In PHP, an array with named keys are called :

- (A) Indexed arrays
- (B) Multidimensional arrays
- (C) Associative arrays
- (D) Numeric arrays

47. Which of the following are used for client side scripting?

- (A) Java script and VB script
- (B) Java script ,VB script and XML
- (C) Java script and XML
- (D) VB script and XML

55. A partial ordered relation is transitive, reflexive and :

- | | |
|-------------------|-----------------|
| (A) antisymmetric | (B) bisymmetric |
| (C) asymmetric | (D) symmetric |

56. $[\sim q \wedge (p \rightarrow q)] \rightarrow \sim p$ is :

- | | |
|-----------------|-------------------|
| (A) Satisfiable | (B) Unsatisfiable |
| (C) Tautology | (D) Invalid |

57. Pigeonhole principle states that if $A \rightarrow B$ and $|A| > |B|$ then :

- | | |
|-------------------------------------|------------------------|
| (A) f is not onto | (B) f may be one-one |
| (C) f is neither one-one nor onto | (D) f is not one-one |

58. IDEA stands for :

- | | |
|--|--|
| (A) International Digital Encryption Algorithm | |
| (B) Integrated Digital Encryption Algorithm | |
| (C) Integrated Data Encryption Algorithm | |
| (D) International Data Encryption Algorithm | |

59. A protocol specification for exchanging structured information in the implementation of web services in computer networks :

- | | |
|--------------|-----------|
| (A) Kerberos | (B) XML |
| (C) SOAP | (D) HTTPS |

60. A Euler graph is one in which

- | | |
|--|--|
| (A) Only two vertices are of odd degree and rests are even | |
| (B) Only two vertices are of even degree and rests are odd | |
| (C) All the vertices are of odd degree | |
| (D) All the vertices are of even degree | |

61. In an undirected graph the number of nodes with odd degree must be :

- | | |
|-----------|----------|
| (A) Zero | (B) Even |
| (C) Prime | (D) Odd |

62. A graph in which all nodes are of equal degrees is known as :

- | | |
|----------------------|-----------------------|
| (A) Multigraph | (B) Regular graph |
| (C) Complete lattice | (D) non regular graph |

63. Which among the following is not an aggregate function in SQL?

- | | |
|---------------|-------------|
| (A) Average() | (B) First() |
| (C) Sum() | (D) Min() |

82. Which is a Scandinavian Country?

- (A) Finland (B) Greece
(C) Ecqador (D) Madagaskar

83. World book day is celebrated on :

- (A) December 10 (B) January 26
(C) March 23 (D) April 23

84. Who started All-India Depressed class federation?

- (A) Mahatma Gandhi (B) Dr. B.R. Ambedkar
(C) Annie Besant (D) Jyothibha Phule

85. Sahodara Sangham was founded by K. Ayyappan in :

- (A) 1903 (B) 1907
(C) 1914 (D) 1917

86. Who wrote 'In Light of India'?

- (A) Pablo Noumda (B) Gabriel Garcia Marguez
(C) Octavia Paz (D) Cheguvere

87. Temple Entry Proclamation was issued in Nov : 12 1936 by :

- (A) Sri Chithira Thirunal Balaramavarma
(B) Swathi Thirunal
(C) Marthanda Varma
(D) Dharma Raja

88. The First annual session of SNDP yogam having been held at :

- (A) 1903 (B) 1904
(C) 1914 (D) 1916

89. Largest river :

- (A) Amazon (B) Nile
(C) Congo (D) Mississipi

90. Chattempi Swamikal attained Samadi at :

- (A) Chempazhanthi (B) Panmana
(C) Perunna (D) Varkala

