1. ....in values processing of all elements
   in an array one by one.
   A. Insertion
   B. Searching
   C. Merging
   D. Traversal

2. feature supports reusability and extensibility of classes.
   A. Overloading
   B. Polymorphism
   C. Inheritance
   D. All options are wrong

3. Value stored in the memory of a variable is called its
   A. R value
   B. L value
   C. D value
   D. Var value

4. The symbol ? : shows .... operator.
   A. Logical
   B. Conditional
   C. Relational
   D. Arithmetic

5. SQL commands consists of one or more logically distinct parts called
   A Argument
   B. Keywords
   C. Clause
   D. Object

6. interlinking means linking ....
   A. Same document
   B. Same image
   C. Different document
   D. All options are wrong

7. Which is *not* a function of operating system?
   A Memory management
   B. Disk management
   C. File management
   D. Virus protection

8. Which generation of computers are based on artificial intelligence?
   A. 2nd
   B. 3rd
   C. 4th
   D. 5th

9. clause allows sorting of query results by one or more columns.
   A. ORDER BY
   B. ALL
   C. WHERE
   D. DISTINCT

10. Programming style is a single entry single exit program construct.
    A. Exploratory
    B. High level
    C. Structured
    D. All options are wrong

11. What is the output of the following C++ program?

```
#include<iostream.h>
int x = 7;
void showx ();
void showxagain ();
void main ()
{

    showx ();

    showx ();

     showxagain ();

    }

 void showx ();
 {
    Int x=34;
    cout << x++ << endl;
    }

 void showxagain ();

 {

     cout << x++end';
}
```

A. 35   36   37

B. 35   35   8
C. 34   34   7
D. 35   36   8

12. The shortcut key for "'Goto" command in MS-Word is
    A. F4
    B. F5
    C. F3
    D. F2

13. provides an alternative name for standard types.
    A. Typestd
    B. Typealt
    C. Typedef
    D. All options are wrong

14. FTP usesnumber of connections for transferring files.
    A. 1
    B. 3
    C. 2
    D. 4

15. normal form is based on the concept of transitive dependency.
    A. 1 NF
    B. 3 NF
    C. 2 NF
    D. All options are wrong

16. Third generation of computers started with the development of
    A. Vacuum tube
    B. Microprocessor
    C. IC's
    D. Transistor.

17. A .... uses logical addresses.
    A. Bridge
    B. Router
    C. Repeater
    D. All options are wrong

18. From where the timing for each object in *A* presentation is set?
    A. Slide show —> custom animation
    B. Slide show —> slide transition
    C. Slide show —> custom transition
    D. View a slide sorter

19. SQL command allows to make queries on the database.
    A. SELECT
    B. CREATE
    C. DROP
    D. DELETE

20. Transmission medium used in LAN is
    A Co-axial cable
    B. Optical fibre
    C. Microwave
    D. Satellite

21. .... is an entry controlled loop.
    A For
    B. Do while
    C. If then
    D. Case

22. The wrapping of data and function into a single unit is called
    A Data abstraction
    B. Data encapsulation
    C. Both Data abstraction and Data encapsulation
    D. All options are wrong

23. The number of 'rows' in a relation is called
    ....
    A. Degree
    B. Domain
    C. Cardinality
    D. D. Range

24. Which type of charts can Excel produce?

    A Line graph and pie chart only
    B. Line graph only
    C. Bar chart, line graph and pie chart
    D. Bar chart and line graph only

25. .... is an Universal gate.
    A. AND
    B. NAND
    C. XOR
    D. XNOR

26. Which feature is used to replace straight quotes with smart quotes while typing?
   A Auto correct
   B. Smart tags
   C. Auto change
   D. Auto format

27. The type of communication in video conferencing is
   A Unicast
   B. Multicast
   C. Straight
   D. Random

28. Each string literal is automatically added with a terminating character.
   A '10'
   B. '11'
   C. '#'
   D. *'#0'*

29. ____ mean unification of several otherwise distinct data files with data redundancy among those files partially or wholly eliminated.
   A Inconsistent
   B. Integrated database
   C. Conversion
   D. Unique

30. By default the members of a class are..............
   A. Public
   B. Private
   C. Protected
   D. All options are wrong

31. In a presentation which view is used to enter speaker comments?
   A. Normal
   B. Slide show
   C. Notes page view
   D. Slide sorter

32. ...data type specifies an empty set of values.
   A. Double
   B. Char
   C. Float
   D. Void

33. ____ attribute is used to restart the numbering in an ordered list.
   A. Type
   B. Number
   C. Start
   D. Order

34. ... is not applied in paragraph formatting.
   A. Indent
   B. Line space
   C. Font style
   D. Justify

35. ____ symbol is used to see every column of a table
   A. /
   B. *
   C. !
   D. --

36. The attribute specifies the URL of the document that you want to link.
A. src
B. img
C. a
D. href

37. A constructor with no argument is................
A. Default
B. Parameterized
C. Copy
D. All options are wrong

38. Which file keeps command to execute automatically when operating system is started?
A. Config.sys
B. Command.com
C. Autoexec.bat
D. All options are wrong

39. When you insert an Excel file into a Word document the data are
A. Embedded
B. Linked
C. Hyperlinked
D. Placed in word table.

40. The SRS document produced at the end of requirement analysis phase is called specification.
A. Black box
B. White box
C. Unit
D. Alpha

41. A performs data translation and protocol conversion functions.
A. Bridge
B. Gateway
C. Router
D. Repeater

42. When a computer is turned on, a special type of absolute loader called is executed.
A. Compile and go
B. Boot
C. Relating
D. Bootstrap

43. of an element shows its position in an array.
A. Name
B. Index
C. Value
D. Data type

44. HTTP is a combination of FTP and...............
A. Web page
B. Web browser
C. E-mail
D. SMTP

45. The process to properly define the database tables to provide flexibility, minimized redundancy and data integrity is called
    ....
    A. Class diagram
    B. Database design
    C. Design rationalization
    D. Data normalization

46. Hexadecimal conversion of $(430.25)_8$ gives
    ....
    A. $(108.44)_{16}$
    B. $(118.54)_{16}$
    C. $(118.44)_{16}$
    D. $(108.54)_{16}$

47. In .... insertion takes place at the rear end.
    A. Sort
    B. Stack
    C. Link list
    D. Queue

48. Slide show can be stopped by pressing ....key.
    A. Right arrow
    B. Escape
    C. Left arrow
    D. Down arrow

49. constraint ensures that no two 'rows' have same value in specified column/ columns.
    A. Default
    B. Unique
    C. Check
    D. All options are wrong

50. is used to combine data and its associated functions under a single unit.
    A. Inheritance
    B. Encapsulation
    C. Association
    D. Polymorphism

51. command provides a window through which one can see the data of another table.
    A. SELECT
    B. CREATE
    C. CREATE VIEW
    D. ALL options are wrong

52. In SQL decimal data type, indicates the maximum number of digits to the right of decimal point.
    A. Fraction
    B. Float
    C. Precision
    D. Scale

53. An application system analyst is concerned about all of the database at the   level.
    A. Logical
    B. Physical
    C. Internal
    D. ALL options are wrong

54. Sorting compares two adjoining values and exchange them if they are not in proper order.
    A. Selection
    B. Heap
    C. Bubble
    D. Insertion

55. generation of computers started to use assembly language.
    A. 1st
    B. 2nd
    C. 3rd
    D. 4th

56. A 2-D array A (4...7, -1...3] requires 2 bytes' storage space for each element. If the array is stored in row-major form having base address 100, then the address of A (6, 2) will be ....
    A. 150
    B. 126
    C. 200
    D. 112

57. .... is an example of full duplex system
    A. Keyboard
    B. Monitor
    C. Walkie-Talkie
    D. Telephone

58. The explicit conversion of an operand to specific type is called
    A. Type promotion
    B. Type variation
    C. Type casting
    D. Type modification

59. Which of the following control expressions are valid for an "IF statement"?
    A. Boolean
    B. Integer
    C. Real
    D. ALL options are wrong

60. The members of a structure variable can be referenced using ……….. operator.
    A. . (dot)
    B. * (star)
    C. / (slash)
    D. # (hash)

61. The number of different spanning trees it complete graph, K_4 and bipartite graph K_2, have
                        and   respectively
    A. 14, 14   B. 16, 14
    C. 16, 4   D. 14, 4

62. Which of the following logic expressions is incorrect?
    A. $1.0 = 1$
    B. $1 \oplus 1 \oplus 1 = 1$
    C. $1 \oplus 1 \oplus 0 = 1$
    D. $1 \oplus 1 = 0$

63. The IEEE-754 double-precision format tc represent floating point numbers, has a lenge of bits.
    A. 16
    B. 32
    C. 48
    D. 64

64. In a positive-edge-triggered 1K flip-flop, if and K both are high then the output will be on the rising edge of the clock.
   A. No change
   B. Set
   C. Reset
   D. Toggle

65. In RDBMS, the constraint that no key attribute (column) may be NULL is referred to as:
   A. Referential integrity
   B. Multi-valued dependency
   C. Entity Integrity
   D. Functional dependency

66. Which of the following statement(s) is/are FALSE in the context of Relational DBMS?
   I.   Views in a database system are important because they help with access control by allowing users to sec only a particular subset of the data in the database.
   II. E-R diagrams are useful to logically model concepts.
   III. An update anomaly is when it is not possible to skirt information unless some other, unrelated information is stored as well.
   IV. SQL is a procedural language.
   A. I and IV only
   B. III and IV only
   C. I, II and III only
   D. II, HI and IV only

67. In a relational database model, NULL values can be used for all but which one of the following?
   A. To allow duplicate tunics in the table by filling the primary key column(s) with NULL.
   B. To avoid confusion with actual legitimate data values like 0 (zero) for integer columns and " (the empty suing) for string columns.
   C. To leave columns in a tuple marked as "unknown" when the actual value is unknown.
   D. To fill a column in a tuple when that column does not really "exist" for that particular tuple.

68. Suppose you are given a binary tree with n nodes, such that each node has exactly either zero or two children. The maximum height of the tree will be
   A. $\frac{n}{2}-1$
   B. $\frac{n}{2}+1$
   C. $\frac{(n-1)}{2}$
   D. $\frac{(n+1)}{2}$

69. Which of the following is not an inherent application of stack?

   A. Implementation of recursion
   B. Evaluation of a postfix expression
   C. Job scheduling
   D. Reverse a string

70. A multiplexer combines four 100-Kbps channels using a time slot of 2 bits. What is the bit rate?
   A 100 Kbps
   B. 200 Kbps
   C. 400 Kbps
   D. 1000 Kbps

71. In TCP/IP Reference model, the job of layer is to permit hosts to inject packets into any network and travel them independently to the destination.
   A Host-to-network
   B. Transport
   C. Application
   D. All of these

72. Optical fiber uses reflection to guide light through a channel, in which angle of incidence is the critical angle.
   A. equal to
   B. less than
   C. greater than
   D. less than or equal to

73. In the bodies of the two loops are merged together to form a single loop provided that they do not make any references to each other.
   A. Loop unrolling
   B. Strength reduction
   C. Loop concatenation
   D. Loop jamming

74. In UNIX,_____creates three subdirectories : 'PIS' and two subdirectories 'progs' and 'data' from just created subdirectory 'PIS'.
   A mkdir PIS/progs PIS/data PIS
   B. mkdir PIS progs data
   C. mkdir PIS PIS/progs PIS/data
   D. mkdir PIS/progs data

75. The model is preferred for software development when the requirements are not clear.
   A. Rapid Application Development
   B. Rational Unified Process.
   C. Evolutionary Model
   D. Waterfall Model

76. Which of the following is not included in waterfall model?
   A. Requirement analysis
   B. Risk analysis
   C. Design
   D. Coding

77. The cyclomatic complexity of a flow graph V(G), in terms of predicate nodes is:
   A. $P + 1$
   B. $P - 1$
   C. $P - 2$
   d. $P + 2$

   Where P is number of predicate nodes in flow graph V(G).

78. The extent to which a software tolerates the unexpected problems. is termed as:
   A. Accuracy
   B. Reliability
   C. Correctness
   D. Robustness

79. Given the following statements:
   1. Strategic value of data mining is timestamping.
   2. Information collection is an expensive process in building an expert system.

   Which one of the following options is correct?
   A. Both I and 2 are false
   B. Both t and 2 are true
   C. 1 is true. 2 is false.
   D. 1 is false, 2 is true.

80. Which of the following is a sequential circuit?
   A. Multiplexer
   B. Decoder
   C. Counter
   D. Full adder

81. 8085 microprocessor has_____ hardware interrupts.
   A. 2
   B. 3
   C. 4
   D. 5

82. The register that stores all interrupt requests is:
   A. Interrupt mask register
   B. Interrupt service register
   C. Interrupt request register
   D. Status register

83. The _____ addressing mode is similar to register indirect addressing mode, except that an offset is added to the contents of the register. The offset and register are specified in the instruction.
   A.   Base indexed
   B.   Base indexed plus displacement
   C.   Indexed
   D.   Displacement

84. In_____ method, the word is written to the block in both the cache and main memory, in parallel.
   A. Write through
   B. Write back
   C. Write protected
   D. Direct mapping

85. Which of the following statements concerning Object-Oriented databases is FALSE?
   A.   Objects in an object-oriented database contain not only data but also methods for processing the data.
   B.   Object-oriented databases store computational instructions in the same place as the data.
   C.   Object-oriented databases are more adapt at handling structured (analytical) data than relational databases.
   D.   Object-oriented databases store more types of data than relational databases and access that data faster.

86. In distributed databases, location transparency allows for database users, programmers and administrators to treat the data as if it is at one location. A SQL query with location transparency needs to specify:
   A. Inheritances
   B. Fragments
   C. Locations
   D. Local formats

87. Which of the following is false regarding the evaluation of computer programming languages?
   A.   Application oriented features
   B.   Efficiency and Readability
   C.   Software development
   D.   Hardware maintenance cost

88. Match the following:
   (a) Line coding   I. A technique to change analog signal to digital data.
   (b) Block coding   2. Provides synchronization without increasing number of bits.
   (c) Scrambling   3. Process of converting digital data to digital signal.
   (d) Pulse code   4. Provides redundancy
        Modulation   to ensure synchronization and inherits error detection.
   Codes:
   (a)   (b) (c) (d)
   4   3   2   1
   3   4   2   1
   I   3   2   4
   2   1   4   3

89. The number of different binary trees with 6 nodes is • .
   A. 6
   B. 42
   C. 132
   D. 256

90. Implicit return type of a class constructor is:
   A. not of class type itself
   B. class type itself
   C. a destructor of class type
   D. a destructor not of class type

91. Which of the following statements is not correct?
   A. HTML is not screen precise formatting language.
   B. HTML does not specify a logic.
   C. DHTML is used for developing highly interactive web pages.
   D. HTML is a programming language

92. Match each application/software design concept in List—I to its definition in List—II.

List I		List II
(a) Coupling	1.	Easy to visually inspect the design of the software and understand its purpose.
(b) Cohesion	2.	Easy to add functionality to a software without having to redesign it.
(c) Scalable	3.	Focus of a code upon a single goal.
(d) Readable	4.	Reliance of a *code* module upon other code modules

   Codes:

	(a)	(b)	(c)	(d)
A.	2	I	4	3
B.	3	4	1	2
C.	4	3	2	1
D.	4	I	3	2.

93. Software safety is quality assurance activity that focuses on hazards that

   A. affect the reliability of a software component.
   B. may cause an entire system to fail.
   C. may result from user input errors.
   D. prevent profitable marketing of the final product.

94. Which of the following sets represent five stages defined by Capability Maturity Model (CMM) in increasing order of maturity?

   A. Initial, Defined, Repeatable, Managed, Optimized.
   B. Initial, Repeatable, Managed, Defined. Optimized.
   C. Initial, Defined, Managed, Repeatable, Optimized.
   D. Initial, Repeatable, Managed, Defined. Optimized.

95. In UNIX, processes that have finished execution but have not yet had their status collected are known as

A. Sleeping processes
B. Stopped processes
C. Zombie processes
D. Orphan processes

96. In Unix operating system, when a process creates a new process using the fork 0 system call, which of the following state is shared between the parent process and child process?
A. Heap
B. Stack
C. Shared memory segments
D. Both Heap and Stack

97. Which of the following information about the UNIX file system is not correct?
A. Super block contains the number of i-nodes, the number of disk blocks, and the start of the list of free disk blocks
B. An i-node contains accounting information as well as enough information to locate all the disk blocks that holds the files data.
C. Each i-node is 256-bytes long.
D. All the files and directories are stored in data blocks.

98. Which of the following option with reference to UNIX operating system is not correct?
   A.   INT signal is sent by the terminal driver when one types <Control-C> and it is a request to terminate the current operation.
   B.   TERM is a request to terminate execution completely. The receiving process will clean up its state and exit.
   C.   QUIT is similar to TERM, except that it defaults to producing a core dump if not caught.
   D.   KILL is a blockable signal

99. Which of the following statement is not correct with reference to cron daemon in UNIX OS.?
 A. The cron daemon is the standard tool for running commands on a pre-determined schedule.
 B. It starts when the system boots and runs as long as the system is up.
 C. Cron reads configuration files that contain list of command lines and the times at which they invoked.
 D. Crontab for individual users are not stored.

100. A software program that infers and manipulates existing knowledge in order to generate new knowledge is known as:
 A. Data dictionary
 B. Reference mechanism
 C. Inference engine
 D. Control strategy

ANSWERS

1	2	3	4	5	6	7	8	9	10
D	C	A	B	C	C	D	D	A	C

11	12	13	14	15	16	17	18	19	20
C	B	C	C	B	C	B	A	A	A

21	22	23	24	25	26	27	28	29	30
A	B	C	C	B	D	B	A	B	B

31	32	33	34	35	36	37	38	39	40
C	D	A	C	B	D	A	C	D	A

41	42	43	44	45	46	47	48	49	50
D	D	B	D	D	B	D	B	B	B

51	52	53	54	55	56	57	58	59	60
C	D	A	C	B	B	D	C	A	A

61	62	63	64	65	66	67	68	69	70
C	C	D	D	C	D	A	C	C	C

71	72	73	74	75	76	77	78	79	80
D	C	D	C	C	B	A	D	B	C

81	82	83	84	85	86	87	88	89	90
D	C	D	A	C	B	D	B	C	B

91	92	93	94	95	96	97	98	99	100
D	C	B	B	C	C	C	D	D	C