

186/24

Question Booklet Sl. No.

Question Booklet Alpha Code

A

A

Total Number of Questions : 100

Time : 90 Minutes

Maximum Marks : 100

**INSTRUCTIONS TO CANDIDATES**

1. The Question Paper will be given in the form of a Question Booklet. There will be four versions of Question Booklets with Question Booklet Alpha Code viz. **A, B, C & D**.
2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the Question Booklet.
3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.
4. If you get a Question Booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator **IMMEDIATELY**.
5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your Question Booklet is un-numbered, please get it replaced by new Question Booklet with same alpha code.
6. The Question Booklet will be sealed at the middle of the right margin. Candidate should not open the Question Booklet, until the indication is given to start answering.
7. Immediately after the commencement of the examination, the candidate should check that the Question Booklet supplied to him/her contains all the 100 questions in serial order. The Question Booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.
8. A blank sheet of paper is attached to the Question Booklet. This may be used for rough work.
9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**
10. Each question is provided with four choices **(A), (B), (C)** and **(D)** having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.
11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**
12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.
13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.

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1. If  $P, Q, R$  are subsets of a set  $A$ , then  $R \times (P^c \cup Q^c)^c =$ 
  - A)  $(R \times P) \cap (R \times Q)$
  - B)  $(R \times P) \cup (R \times Q)$
  - C)  $(R \times P^c) \cup (R \times Q^c)$
  - D) None of the above
  
2. If  $A, B$ , and  $C$  are non-empty sets, then  $(A - B) \cup (B - A) =$ 
  - A)  $(A \cup B) - B$
  - B)  $(A \cup B) - (A \cap B)$
  - C)  $(A \cup B) - A$
  - D)  $(A \cup B)$
  
3. Let  $R$  be the relation on the set  $R$  of all real numbers defined by  $aRb$  iff  $|a - b| \leq 1$ , then  $R$  is
  - i. Reflexive
  - ii. Symmetric
  - A) Only i is true
  - B) Only ii is true
  - C) Both i and ii are true
  - D) Neither i nor ii is true
  
4. Let  $N$  denote the set of natural numbers and  $R$  be the relation on  $N \times N$  defined by  $(a, b)R(c, d)$  if  $ad(b + c) = bc(a + d)$ , then  $R$  is
  - A) reflexive and symmetric only
  - B) reflexive and transitive only
  - C) symmetric and transitive only
  - D) an equivalence relation
  
5. For all natural numbers' "n", the expression  $4^n + 15n - 1$  is
  - i. Divisible by 3
  - ii. Divisible by 9
  - A) Only i is true
  - B) Only ii is true
  - C) Both i and ii are true
  - D) Neither i nor ii is true



12. If there exists a linear statistical relationship between two variables  $x$  and  $y$ , then the regression coefficient of  $y$  on  $x$  is
- A)  $\frac{\text{Cov}(x,y)}{\sigma_x \sigma_y}$       B)  $\frac{\text{Cov}(x,y)}{\sigma_x^2}$       C)  $\frac{\text{Cov}(x,y)}{\sigma_y^2}$       D)  $\frac{\text{Cov}(x,y)}{\sigma_x}$
13. Simplify the Boolean expression  $AB + A(B + C)' + B(B + C)'$ .
- A)  $AB'C'$       B)  $AB'$       C)  $AC'$       D)  $A'B'C'$
14. The SOP expression for a logic function is given by,  $\Sigma(0, 1, 2, 3, 4, 5, 6)$ . The simplification of this function using Karnaugh Maps will give the following result
- A)  $A' + B' + C'$   
 B)  $A' + AB' + C'$   
 C)  $A' + B + C$   
 D)  $A' + AB' + C$
15. Choose the correct option with respect to a full adder circuit.
- A) A carry is generated when both input bits are 1  
 B) A carry is propagated when either or both input bits are 1  
 C) Both A) and B)  
 D) Neither A) nor B)
16. Identify the addressing mode used in the instruction, `.MOV [5000], CX`
- A) Direct Addressing Mode  
 B) Immediate Addressing Mode  
 C) Register Addressing Mode  
 D) Indirect Addressing Mode
17. The size of the address bus and data bus of the 8086 microprocessor are respectively
- A) 16 and 16      B) 20 and 16  
 C) 16 and 20      D) None of these

18. Identify the correct statement.
- A) A micro-operation consists of one or more instruction cycles
  - B) A micro-operation consists of fetch, decode and execute cycles
  - C) An execute cycle consists of one or more micro-operations
  - D) None of these
19. Which of the following situations can result in cache-coherence issues ?
- A) A single processor with a single cache
  - B) Multiple processors sharing the same cache
  - C) Multiple processors with private caches
  - D) None of the above
20. When a large block of data is to be transferred between an I/O device and the main memory, which of the following techniques is fastest ?
- A) Direct Memory Access
  - B) Interrupt Driven I/O
  - C) Programmed I/O
  - D) Polling
21. The address bus of a processor is 32 bits wide. The maximum size of the main memory supported by this processor is
- A) 1 GB
  - B) 2 GB
  - C) 32 GB
  - D) 4 GB
22. Which among the following is not a feature of real-time schedulers ?
- A) Preemptive Execution
  - B) Meeting Deadlines
  - C) Priority Based Execution
  - D) Non-preemptive Execution

23. Given below is a code-snippet in C. Which variable will be shared between 2 threads executing the same code ?

```
int myAge=20;
int main() {
    int myMarks = 50;
    _____
}
```

- A) myAge  
 B) myMarks  
 C) Both myAge and myMarks  
 D) Neither myAge nor myMarks
24. A user does not have executable permission for a given file. Which of the following commands can be used to update the permission ?

- A) Chown  
 B) Chmod  
 C) Useradd  
 D) Usermod

25. Which of the following is not a function of a bootloader ?

- A) Loading the operating system  
 B) Virtual Memory Management  
 C) Memory Initialization  
 D) Hardware Initialization

26. What will be the output when the following shell script named test, is executed as ./test 25 26 27 ?

```
#!/bin/sh
echo "Your name is $1 and your mark is $2"
```

- A) The script will generate an error  
 B) Your name is 26 and your mark is 27  
 C) Your name is test and your mark is 25  
 D) Your name is 25 and your mark is 26

27. Which of the following cases defined the complexities for best possible input ?
- A) Worst-case complexity
  - B) Best-case complexity
  - C) Average-case complexity
  - D) All of the above
28. Which of the following is a disadvantage of ADT ?
- A) The different modules can be used by different persons for different purposes with small changes
  - B) ADTs encourage modularity of the programming
  - C) By using abstract data types, we can change implementations quickly
  - D) None of the above
29. The array which contains majority of non-zero elements is
- A) Scalar array
  - B) Sparse array
  - C) Orthogonal array
  - D) None of the above
30. For the following code, how much memory is allocated ?
- ```
struct example  
{  
    int a;  
    float b;  
    char c;  
};
```
- A) 4 bytes
  - B) 7 bytes
  - C) 8 bytes
  - D) 9 bytes
31. A class is called a container class if
- A) It contains all the member functions in public mode
  - B) It contains another class inside
  - C) It contains the objects of another class as data members
  - D) All of the above



32. `int A[2][4];` then `A[1][2]` is equivalent to
- A) `*(A + 1) + 2`                      B) `* (* (A + 1) + 2)`  
 C) `*(A [1] + 2)`                      D) Both B) and C)
33. Which of the following is/are a polish notation ?
- A) Postfix                                  B) Infix  
 C) Prefix                                    D) All of the above
34. An element of a stack is read in  $O(1)$  time only if
- A) Stack is sequentially implemented  
 B) Stack is dynamically implemented  
 C) It doesn't matter how the stack is implemented  
 D) Both A) and B)
35. The linked list is not suitable data structure for
- A) Binary search                          B) Linear search  
 C) Bubble sort                            D) Circular queue
36. If post-order traversal of some tree produced the sequence PNMZYX, then which element will be the root node of the tree ?
- A) P                                          B) Y  
 C) X                                          D) None of the above
37. The vertex with degree one is called
- A) Isolated vertex                        B) Pendant vertex  
 C) Loop                                      D) None of the above
38. Which of the following statements are correct ?
- A) Hashing performs insertions, deletions and searching in constant average time  
 B) A separate chaining technique of hashing is a popular and space-efficient alternative to quadratic probing  
 C) Compilers use hash tables called symbol table to keep track of declared variables in the source code  
 D) All of the above

39. The feature which indicates code reusability in Object Oriented Programming is
- A) Abstraction
  - B) Inheritance
  - C) Encapsulation
  - D) Polymorphism
40. Wrapper class in Java is
- A) Used to encapsulate primitive data types
  - B) Does not support inter operability
  - C) Create a new instance of the class
  - D) None of the above
41. Which of the following are valid ways for dynamic memory allocation for an integer by in C++ ?
- A) `int *p = new int(10);`
  - B) `int *p; p = new int; *p = 10;`
  - C) `int *p = NULL; p = new int; *p=10;`
  - D) All of the above
42. In order to assign a value of 66 to the variable year, which of following can be used within an <applet> tag ?
- A) `number = getParameter(66)`
  - B) `<number=66>`
  - C) `<param name=number value=66>`
  - D) `<param = radius value=66>`
43. Which of the methods are invoked when an applet begins ?
- A) `init()`, `start()`, `create()`
  - B) `start()`, `init()`, `paint()`
  - C) `init()`, `start()`, `paint()`
  - D) `start()`, `init()`, `create()`

44. Can the method main() be overloaded in Java ?
- A) No, main() method cannot be overloaded
  - B) Yes, the main() method can be overloaded
  - C) Only the return type of the main() method can be overloaded
  - D) Overloading is not applicable to Java methods
45. Which of the following are not legitimate thread states in Java ?
- A) NEW
  - B) EXECUTING
  - C) WAITING
  - D) RUNNABLE
46. Choose the statement which is true regarding polymorphism ?
- A) An overridden method can be more restrictive than the superclass method
  - B) An overridden method can be less restrictive than the superclass method
  - C) Overloaded methods cannot change the return type
  - D) Constructors can be overridden
47. In multiple inheritance, if class C inherits two classes A and B as follows, which class constructor will be called first ?
- ```
class A{ };  
class B{ };  
class C : public A, public B{ };
```
- A) A()
  - B) B()
  - C) C()
  - D) Can't be determined
48. Which of the following can be used to create an abstract class in the C++ programming language ?
- A) By declaring a virtual function in the base class
  - B) By using the pure virtual function in the class
  - C) By declaring the virtual keyword afterward, the class declaration
  - D) None of the above

49. The concept is late binding can be implemented using
- |                       |                       |
|-----------------------|-----------------------|
| A) Static functions   | B) Operator functions |
| C) Constant functions | D) Virtual functions  |
50. What does the 'std::exception' class represent in C++ ?
- A) A specific type of error  
 B) The base class for all standard exception classes  
 C) Only runtime errors  
 D) Only logic errors
51. Consider the following functional dependencies and corresponding implications. Which of the following statements are correct ?
- $\{BP, City\} \rightarrow \{HRA, CCA\}$  implies  $BP \rightarrow \{HRA, CCA\}$
  - $BP \rightarrow \{HRA, CCA\}$  implies  $BP \rightarrow HRA$
  - $\{BP, City\} \rightarrow HRA$  and  $Population \rightarrow City$  implies  $\{BP, Population\} \rightarrow HRA$
  - $BP \rightarrow DA$  and  $\{Designation, DA\} \rightarrow HRA$ , implies  $\{Designation, BP\} \rightarrow HRA$
- |                               |                               |
|-------------------------------|-------------------------------|
| A) All statements are correct | B) Only ii and iv are correct |
| C) i, ii, iv are correct      | D) ii, iii, iv are correct    |
52. Let T1, T2, T3 and T4 are transactions.  
 Determine whether the following schedule is conflict serializable. [subscript indicate transaction number]
- $r_1(Y); r_2(X); r_3(Y); w_1(X); w_4(X); w_2(Z); r_3(X); w_3(X)$
- A) Conflict Serializable; Schedule : T2, T3, T1, T4  
 B) Conflict Serializable; Schedule : T2, T3, T4, T1  
 C) Conflict Serializable; Schedule : T2, T1, T4, T3  
 D) Not Conflict Serializable
53. Consider a schema R(A, B, C, D, E) and functional dependencies  $A \rightarrow C$  and  $B \rightarrow DE$ . The decomposition of R into  $R_1(A, C)$  and  $R_2(B, D, E)$  are
- A) Dependency Preserving, but not lossless join  
 B) Not Dependency Preserving, but lossless join  
 C) Dependency Preserving, and lossless join  
 D) Not dependency Preserving and not lossless join

54. Consider a relation  $R(A, B, C)$  with functional dependencies :  $A \rightarrow B, B \rightarrow C, C \rightarrow A$ . Let  $R$  be decomposed into  $R_1 = (AB)$  and  $R_2 = (BC)$ . Identify the Fds in the closure of  $(F_{R_1} \cup F_{R_2})$ .
- A)  $A \rightarrow B, B \rightarrow C$   
 B)  $A \rightarrow B, B \rightarrow C, B \rightarrow A, C \rightarrow B$   
 C)  $A \rightarrow B, B \rightarrow C, B \rightarrow A, C \rightarrow B, C \rightarrow A, A \rightarrow C$   
 D)  $A \rightarrow B, B \rightarrow C, C \rightarrow A$
55. Consider the following relations and corresponding functional dependencies. Identify the highest normal form of the relations.  
 $R_1(A, B, C, D)$  Fds are  $AB \rightarrow C, BC \rightarrow D$   
 $R_2(A, B, C, D)$  Fds are  $ABC \rightarrow D, D \rightarrow A$
- A)  $R_1$  and  $R_2$  are in 3NF  
 B)  $R_1$  and  $R_2$  are in 2NF  
 C)  $R_1$  is in BCNF and  $R_2$  is in 3NF  
 D)  $R_1$  is in 2NF and  $R_2$  is in 3NF
56. Given a relation instance  $T_1$ , pick the output generated by the following SQL statements:

roll no.	marks
101	50
102	60
103	60
104	70
105	null

- i. `select count(*) from T1`  
 ii. `select count(marks) from T1`  
 iii. `select avg(marks) from T1`
- A) 5, 4, 60  
 B) 5, 5, 48  
 C) 4, 4, 60  
 D) 4, 5, 48

A

57. Assume that data about students in a department is stored in a table, Student (sid, name, gender, gpa, cid). What will be the following query returns ?

```
select cid, count(*)
```

```
from Student
```

```
where gender = "female" and gpa > (select avg(gpa) from Student)
```

```
group by cid;
```

The query returns:

- A) For each course, the number of girl students whose gpa is higher than average gpa of all students in the course.
  - B) For each course, the number of girl students whose gpa is higher than average gpa of all girl students in the department.
  - C) For each course, the number of girl students whose gpa is higher than average gpa of all students in the department.
  - D) For each course, the number of girl students whose gpa is higher than average gpa of all girl students in the course.
58. Consider two relations : R1 (A, B, C) with tuples (2, 3, 5) and (3, 6, 7) and R2 (A, D) with tuples (2, 8) and (5, 9). Out of the tuples given below, identify the tuple not belonging to R(A, B, C, D) formed by full outer join of R1 and R2.

A) (2, 3, 5, Null)

B) (5, Null, Null, 9)

C) (2, 3, 5, 8)

D) (3, 6, 7, Null)

59. Identify the incorrect statement among the following

- A) An update on a view is mapped to an update in the underlying base table, provided the view is defined on a single table without aggregate function.
- B) A join operation can be stated in terms of Cartesian Product followed by a SELECT operation.
- C) The query language relational algebra is nonprocedural, whereas relational calculus is procedural.
- D) It is mandatory to have a separate table to represent a many to many relationship when an ER model is reduced to tables.

60. Identify the option which correct matching of the statements :
- |   |                            |
|---|----------------------------|
| a. The statement that is automatically run by the system as a result of the database modification   | i. Durability              |
| b. Ensure that a value appears in one relation for a given set of attributes also appears for a certain set of attributes in another relation | ii. Isolation              |
| c. The changes applied to the database by a committed transaction must persist in the database, even if there is system failure               | iii. Referential Integrity |
| d. Ensures that changes made to the database by authorized users do not result in a loss of data consistency                                  | iv. Stored Procedure       |
|   | v. Trigger                 |
|   | vi. Integrity Constraints  |

A) a – v, b – iii, c – vi, d – i

B) a – v, b – iii, c – i, d – vi

C) a – iv, b – vi, c – ii, d – iii

D) a – iv, b – iii, c – i, d – vi

61. Consider a relation R (A, B, C, D, E) and following instances :

A	B	C	D	E
a	2	3	4	5
a	2	3	6	5
a	2	3	6	6
a	2	3	4	6

Choose the correct statement about Fds and MVDs in the above relation instances.

- A) FD  $BC \rightarrow D$  and MVD  $BC \twoheadrightarrow D$  are violated
- B) FD  $BC \rightarrow D$  is violated, but MVD  $BC \twoheadrightarrow D$  is not violated
- C) FD  $BC \rightarrow D$  is not violated but MVD  $BC \twoheadrightarrow D$  is violated
- D) FD  $BC \rightarrow D$  and  $BC \twoheadrightarrow D$  are not violated

**A**

62. Identify the true statements about two phase locking:
- i. Two phase locking ensures conflict serializability.
  - ii. Two phase locking does not ensure freedom from deadlock.
  - iii. If the timestamp of a transaction  $T_i$  is smaller than the timestamp of transaction  $T_j$ , two phase locking ensures that the produced schedule is equivalent to a serial schedule.
  - iv. Cascading rollback can be avoided using strict two phase locking.
- A) i, ii, iii are correct  
B) All are correct  
C) i, iii, iv are correct  
D) i, ii, iv are correct
63. Which of the following is not an open source web server ?
- A) Apache Tomcat  
B) nginx  
C) IIS Webserver  
D) lighttpd
64. Which type of language is used to create dynamic web pages ?
- A) Programming language  
B) Style sheet  
C) TCL language  
D) Scripting language
65. What is the correct syntax to make each word of a sentence to start with a capital letter in CSS ?
- A) text-transform : upper;  
B) text-transform : capitalize;  
C) transform : capitalize;  
D) text-style : capital;



66. Which is the tag to create a list of items with bullets in HTML ?
- A) <ul>
  - B) <ol>
  - C) <bl>
  - D) <il>
67. Which of the following is true about XML ?
- A) XML comments begin with `<!--` and end with `-->`
  - B) Element and attribute names are case sensitive
  - C) Both A) and B) are true
  - D) None of the above
68. Which of the following method is used to refresh a webpage in JavaScript ?
- A) location.reload()
  - B) window.refresh()
  - C) window.reload()
  - D) location.refresh()
69. Which of the following is not a valid Web Server control in ASP.NET ?
- A) AdRotator
  - B) Hyperlink
  - C) Timeout
  - D) Calendar
70. In Visual Basic, which of the following window displays the list of projects contained in the current solution ?
- A) Solution Explorer Window
  - B) List Window
  - C) Catalogue Window
  - D) Project Window
71. Which is the first event triggered when a user requests an ASP.NET page ?
- A) OnPreLoad
  - B) PreInit
  - C) Init
  - D) InitComplete
72. In XML, DTD stands for
- A) Document Type Declaration
  - B) Data Type Definition
  - C) Document Type Definition
  - D) Document to Declaration

73. How Ajax web applications exchange data from a webserver ?
- A) Before loading the web page
  - B) With full page refresh
  - C) With synchronous request
  - D) With call-back function
74. Which of the following is not true for SignalR ?
- A) Sends messages to specific clients or groups of clients
  - B) Handles connection management automatically
  - C) SignalR uses request response model
  - D) SignalR uses hubs to communicate between clients and servers
75. At which layer of the OSI model does IP addressing operate ?
- A) Application layer
  - B) Transport layer
  - C) Network layer
  - D) Data link layer
76. In the TCP/IP model, which protocol is used to transfer web pages from servers to clients ?
- A) FTP
  - B) HTTP
  - C) SMTP
  - D) SNMP
77. Which of the following IEEE standards is associated with Wireless LANs (Wi-Fi) ?
- A) 802.11
  - B) 802.5
  - C) 802.3
  - D) 802.4
78. Which protocol is commonly used alongside IP to provide error reporting and diagnostic messages ?
- A) DNS
  - B) ARP
  - C) UDP
  - D) ICMP

79. What is the primary purpose of UDP in the transport layer ?
- A) Network routing and addressing
  - B) Fast, connectionless data transfer without reliability guarantees
  - C) Reliable data delivery with error correction
  - D) Connection-oriented data transfer
80. IDEA (International Data Encryption Algorithm) operates using which key size ?
- A) 128 bits
  - B) 64 bits
  - C) 160 bits
  - D) 56 bits
81. Which attack method involves injecting malicious code into trusted websites to target users accessing those sites ?
- A) SQL injection
  - B) Phishing
  - C) Man-in-the-middle
  - D) Cross-site Scripting (XSS)
82. Which of the following is a valid IPv4 address ?
- A) 192.168.1.100
  - B) 192.256.1.1
  - C) 10.500.5.25
  - D) 172.16.300.45
83. Which physical medium uses Time Division Multiplexing (TDM) to reduce signal degradation in long-distance communication ?
- A) Twisted pair cable
  - B) Coaxial cable
  - C) Fiber optic cable
  - D) All of these

84. Which of the following correctly describes the role of the backoff algorithm in medium access control ?
- A) It prioritizes stations based on their IP addresses
  - B) It guarantees that only one station transmits at a time
  - C) It allows stations to retransmit after a random delay following a collision
  - D) It ensures that a station always transmits at a fixed interval
85. In Kerberos, which type of cryptographic key is shared between the client and the Authentication Server (AS) ?
- A) A symmetric key derived from the client's password
  - B) Public key generated by the client
  - C) A session key provided by the Key Distribution Center (KDC)
  - D) Private key stored on the client's device
86. What is the purpose of the bind() function in socket programming ?
- A) To close a socket connection
  - B) To associate a socket with a local address and port
  - C) To send data to a socket
  - D) To listen for incoming connections
87. Which exception is thrown in Java RMI if a remote method invocation fails ?
- A) NotBoundException
  - B) SecurityException
  - C) RemoteException
  - D) IOException
88. What is the primary role of UDDI in web services ?
- A) Transporting data between systems
  - B) Discovering and registering web services in a directory
  - C) Implementing security protocols for web services
  - D) Discovering and registering web services in a directory

89. The most distinguishing feature of this model is its ability to handle risks. Which of the following software process model is referred here ?
- A) Waterfall model
  - B) Spiral model
  - C) Prototyping model
  - D) None of the above
90. Which of the following is not an Object Oriented methodology for Software design ?
- A) Data flow diagram
  - B) Use case diagram
  - C) Sequence diagram
  - D) Collaboration diagram
91. Which of the following International Standards Organization (ISO) standard is applicable for software product development ?
- A) ISO 14000
  - B) ISO 31000
  - C) ISO 9001
  - D) ISO 26000
92. \_\_\_\_\_ testing verifies the internal datastructures and algorithms of a module during the validation phase of software development.
- A) White box testing
  - B) Black box testing
  - C) Integration testing
  - D) None of the above

93. \_\_\_\_\_ is qualitative indication of the degree to which a module focuses on one thing.
- A) Modularity
  - B) Coupling
  - C) Cohesion
  - D) Functional Dependence
94. Which of the following is false when calculating cyclomatic complexity,  $V(G)$ , for a flow graph  $G$  ?
- A) The number of regions
  - B)  $V(G) = E - N + 2$ , where  $E$  is the number of edges and  $N$  is number of nodes
  - C)  $V(G) = P + 1$ , where  $P$  is the number of predicate nodes
  - D) The number of conditions
95. Which of the following is a system testing done among the small group of customers ?
- A) Alpha testing
  - B) Beta testing
  - C) Stress testing
  - D) None of the above
96. Which software size metric can be used to easily estimate the size of a software product directly from the problem specification ?
- A) Lines of Code
  - B) COCOMO
  - C) Function Point
  - D) Delphi technique

97. Which of the following is not a level of Capability Maturity Model developed by Software Engineering Institute of Carnegie Mellon University ?
- A) Optimizing
  - B) Repeatable
  - C) Verifiable
  - D) Defined
98. If a realtime system is used to control the safety system in a car, it must detect a possible crash and inflate an air bag before the driver's head hits the steering wheel. Which control model is suitable for this ?
- A) Interrupt driven model
  - B) Broadcasting model
  - C) Manager model
  - D) Abstract Machine model
99. Which of the following requirement elicitation method is used to understand the social and organizational requirements ?
- A) Scenarios
  - B) Ethnography
  - C) Use cases
  - D) VORD
100. Which one of the following maintenance involves enhancing functionalities of the system according to the customer's requirements ?
- A) Corrective maintenance
  - B) Adaptive maintenance
  - C) Perfective maintenance
  - D) None of the above
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Space for Rough Work

