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Test Booklet Series

T. B. C. : OTE - 11/2023



TEST BOOKLET

COMPUTER SCIENCE & ENGINEERING

PAPER—II

Sl. No. **209333**

Time Allowed : 3 Hours

Maximum Marks : 200

: INSTRUCTIONS TO CANDIDATES :

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET OF THE SAME SERIES ISSUED TO YOU.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C** OR **D**, AS THE CASE MAY BE, IN THE APPROPRIATE PLACE IN THE ANSWER SHEET USING BALL POINT PEN (BLUE OR BLACK).
3. You have to enter your **Roll No.** on the Test Booklet in the Box provided alongside. **DO NOT** write *anything else* on the Test Booklet.
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5. This Test Booklet contains **100** items (questions). Each item (question) comprises of four responses (answers). You have to select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), you should mark (darken) the response (answer) which you consider the best. In any case, choose **ONLY ONE** response (answer) for each item (question).
6. You have to mark (darken) all your responses (answers) **ONLY** on the **separate Answer Sheet** provided by using **BALL POINT PEN (BLUE OR BLACK)**. See instructions in the Answer Sheet.
7. All items (questions) carry equal marks. All items (questions) are compulsory. Your total marks will depend only on the number of correct responses (answers) marked by you in the Answer Sheet. **There shall be negative marking of 25% weightage.**
8. Before you proceed to mark (darken) in the Answer Sheet the responses (answers) to various items (questions) in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per the instructions sent to you with your **Admission Certificate**.
9. After you have completed filling in all your responses (answers) on the Answer Sheet and after conclusion of the examination, you should hand over to the Invigilator the *Answer Sheet* issued to you. You are allowed to take with you the candidate's copy / second page of the Answer Sheet along with the **Test Booklet**, after completion of the examination, for your reference.
10. Sheets for rough work are appended in the Test Booklet at the end.

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1. What will be the output of the following code?

```
#include<stdio.h>
int main()
{
    char arr[100];
    printf("%d", scanf("%s", arr));
    return 1;
}
```

- (A) 9
- (B) 10
- (C) 100
- (D) 1

2. What will be the output of the following code?

```
#include<stdio.h>
int main()
{
    printf("%d", 1 << 2 + 3 << 4);
    return 0;
}
```

- (A) 112
- (B) 52
- (C) 512
- (D) 0

3. What will be the output of following code?

```
#include<stdio.h>
int main()
{
    int i = 5, j = 10, k=15;
    printf("%d", sizeof(k /= i + j));
    printf("%d", k);
    return 0;
}
```

- (A) 41
- (B) 415
- (C) 21
- (D) Compiler error

4. What will be the output of following code?

```
#include<stdio.h>

int getMax(int* arr, int size)
{
    int max = arr[0];

    for (int i = 1; i < size; i++)
    {
        if (max < arr[i])
        {
            max = arr[i];
        }
    }

    return max;
}
```

```
int main()
{
    int arr[10]={135, 165, 1, 16, 511,
                65, 654, 654, 169, 4};

    printf("Largest Number in the
    Array: %d", getMax(arr, 10));

    return 0;
}
```

- (A) 654
- (B) 569
- (C) 558
- (D) 777

5. What will be the output of following code?

```
#include<stdio.h>

const int M = 3;
const int N = 3;

void print(int arr[M][N])
{
    int i, j;
    for (i = 0; i < M; i++)
        for (j = 0; j < N; j++)
            printf("%d", arr[i][j]);
}

int main()
{
    int arr[][3] = {{1, 2, 3}, {4, 5, 6},
                    {7, 8, 9}};

    print(arr);
    return 0;
}
```

- (A) 1 2 3 4 5 6 7 8 9
(B) 2 5 8 9 6 3 7 5 6
(C) 1 4 8 9 8 7 8 8 9
(D) 1 1 1 1 1 1 1 1 1

6. struct node

```
{
    int i;
    float j;
};

struct node *s[10];
```

The above C declaration defines

- (A) an array, each element of which is pointer to a structure of type node

- (B) a structure of 2 fields, each field being a pointer to an array of 10 elements
(C) a structure of 3 fields: an integer, a float and an array of 10 elements
(D) an array, each element of which is a structure of type node

7. The number of tokens in

```
printf("i = %d, & i - %x", i, & i);
```

- (A) 3
(B) 10
(C) 25
(D) 22

8. Assume that objects of the type short, float and long occupy 2 bytes, 4 bytes and 8 bytes respectively. The memory requirement for variable t, ignoring alignment

```
struct {
    short s [5];
```

```
    union {
```

```
        float y;
```

```
        long z;
```

```
    } u;
```

```
    } t
```

- (A) 22 bytes
(B) 18 bytes
(C) 14 bytes
(D) 10 bytes

9. Consider the given three C functions :

```
[P1] int * g (void)
```

```
{
```

```
    int x = 10;
```

```
    return (&x);
```

```
}
```

```
[P2] int * g (void)
```

```
{
```

```
    int * px;
```

```
    *px = 10;
```

```
    return px;
```

```
}
```

```
[P3] int * g (void)
```

```
{
```

```
    int * px
```

```
    px = (int *) malloc (sizeof(int));
```

```
    *px = 10;
```

```
    return px;
```

```
}
```

Which of the above three functions are likely to cause problems?

- (A) Only P1 and P2
- (B) Only P3
- (C) Only P1 and P3
- (D) P1, P2 and P3

10. What does the given program print?

```
char c[ ] = "GATE2011"
```

```
char *p = c;
```

```
printf("%s", p + p[3] - p[1]);
```

- (A) GATE 2011
- (B) 2011
- (C) E2011
- (D) 011

11. The output of the following C program is

```
void f1 (int a, int b)
```

```
{
```

```
    int c;
```

```
    c=a; a=b; b=c;
```

```
}
```

```
void f2(int *a, int *b)
```

```
{
```

```
    int c;
```

```
    c=*a; *a=*b; *b=c;
```

```
}
```

```
int main()
```

```
{
```

```
    int a=4, b=5, c=6;
```

```
    f1(a,b);
```

```
    f2(&b, &c);
```

```
    printf("%d",c-a-b);
```

```
}
```

- (A) -5
- (B) 6
- (C) -6
- (D) 0

12. The following program prints

```
#include<stdio.h>
void f(int *p, int *q)
{
    p = q;
    *p = 2;
}
int i = 0, j = 1;
int main()
{
    f(&i, &j);
    printf("%d %d \n", i, j);
    return 0;
}
```

- (A) 2 2
- (B) 2 1
- (C) 0 1
- (D) 0 2

13. Consider the following C program

```
void f(int, short);
void main()
{
    int i = 100;
    short s = 12;
    short *p = &s;
    ____; // call to f()
}
```

Which one of the following expressions, when placed in the blank above, will **not** result in a type checking error?

- (A) f(s,*s)
- (B) i = f(i,s)
- (C) f(i,*s)
- (D) f(i,*p)

14. The output of the following C program is

```
#include<stdio.h>
void mystery(int *ptrb, int *ptrb)
{
    int *temp;
    temp = ptrb;
    ptrb = ptrb;
    ptrb = temp;
}
int main()
{
    int a=2016, b=0, c=4, d=42;
    mystery(&a, &b);
    if (a < c)
        mystery(&c, &a);
    mystery(&a, &d);
    printf("%d\n", a);
}
```

- (A) 2016
- (B) 2018
- (C) 016
- (D) 16

15. The most appropriate matching for the following pairs

X: m=malloc(5); m= NULL;

Y: free(n); n→value = 5;

Z: char *p; *p='a';

1: using dangling

2: using uninitialized pointers

3: lost memory

is

- (A) X-1 Y-3 Z-2
- (B) X-2 Y-1 Z-3
- (C) X-3 Y-2 Z-1
- (D) X-3 Y-1 Z-2

16. A queue follows
- (A) LIFO principle
 - (B) FIFO principle
 - (C) Linear tree
 - (D) Ordered array
17. The time complexity used for inserting a node in a priority queue on the basis of key is
- (A) $O(n)$
 - (B) $O(n^2)$
 - (C) $O(n \log n)$
 - (D) $O(\log n)$
18. Which data structure do we use for testing a palindrome?
- (A) Heap
 - (B) Tree
 - (C) Priority queue
 - (D) Stack
19. Which of these will form an inversion in this given array?
- arr = {2, 8, 5, 3}
- (A) (2, 8)
 - (B) (8, 5), (8, 3)
 - (C) (2, 8), (2, 5), (1, 3)
 - (D) (8, 5), (8, 3), (5, 3)
20. We can use a self-balancing binary search tree for implementing the
- (A) hash table
 - (B) priority queue
 - (C) heap sort and priority queue
 - (D) heap sort
21. Which of the following statements about binary tree is **correct**?
- (A) Every binary tree is either complete or full
 - (B) Every complete binary tree is also a full binary tree
 - (C) Every full binary tree is also a complete binary tree
 - (D) A binary tree cannot be both complete and full
22. Suppose we have numbers between 1 and 1000 in a binary search tree and want to search for the number 363. Which of the following sequences **could not** be the sequence of the node examined?
- (A) 2, 252, 401, 398, 330, 344, 397, 363
 - (B) 924, 220, 911, 244, 898, 258, 362, 363
 - (C) 925, 202, 911, 240, 912, 245, 258, 363
 - (D) 2, 399, 387, 219, 266, 382, 381, 278, 363
23. Suppose a complete binary tree has height $h > 0$. The minimum number of leaf nodes possible in term of h is
- (A) $2^h - 1$
 - (B) $2^{h-1} + 1$
 - (C) 2^{h-1}
 - (D) $2^h + 1$

24. The Breadth First Search traversal of a graph will result into

- (A) linked list
- (B) tree
- (C) graph with back edges
- (D) arrays

25. A person wants to visit some places. He starts from a vertex and then wants to visit every place connected to this vertex and so on. What algorithm should he use?

- (A) Depth First Search
- (B) Breadth First Search
- (C) Trim's algorithm
- (D) Kruskal's algorithm

26. Consider a complete undirected graph with vertex set $\{0, 1, 2, 3, 4\}$. Entry W_{ij} in the matrix W below is the weight of the edge $\{i, j\}$. What is the minimum possible weight of a spanning tree T in this graph such that vertex 0 is a leaf node in the tree T ?

$$W = \begin{pmatrix} 0 & 1 & 8 & 1 & 4 \\ 1 & 0 & 12 & 4 & 9 \\ 8 & 12 & 0 & 7 & 3 \\ 1 & 4 & 7 & 0 & 2 \\ 4 & 9 & 3 & 2 & 0 \end{pmatrix}$$

- (A) 7
- (B) 8
- (C) 9
- (D) 10

27. What is an internal sorting algorithm?

- (A) Algorithm that uses tape or disk during the sort
- (B) Algorithm that uses main memory during the sort
- (C) Algorithm that involves swapping
- (D) Algorithm that is considered 'in place'

28. The balance factor of a node in a binary tree is defined as

- (A) addition of heights of left and right subtrees
- (B) height of right subtree minus height of left subtree
- (C) height of left subtree minus height of right subtree
- (D) height of right subtree minus one

29. Which of the following tree data structures is **not** a balanced binary tree?

- (A) AVL tree
- (B) Red-black tree
- (C) Splay tree
- (D) B-tree

30. A B-tree of order 4 and of height 3 will have a maximum of ____ keys.

- (A) 255
- (B) 63
- (C) 127
- (D) 188

31. Which of the following refers to the degree (or arity) of relation in relational database systems?
- (A) Number of attributes of its relation schema
 - (B) Number of tuples stored in the relation
 - (C) Number of entries in the relation
 - (D) Number of distinct domains of its relation schema
32. Which one of the following is used to represent the supporting many-one relationships of a weak entity set in an entity-relationship diagram?
- (A) Diamonds with double/bold border
 - (B) Rectangles with double/bold border
 - (C) Ovals with double/bold border
 - (D) Ovals that contain underlined identifiers
33. Given the basic ER and relational models, which of the following is **incorrect**?
- (A) An attribute of an entity can have more than one value
 - (B) An attribute of an entity can be composite
 - (C) In a row of a relational table, an attribute can have more than one value
 - (D) In a row of a relational table, an attribute can have exactly one value or a NULL value
34. After groups have been established, SQL applies predicates in the ____ clause, allowing aggregate functions to be used.
- (A) Where
 - (B) Having
 - (C) Group by
 - (D) With
35. What is the function of the following command?
- Delete from R where P;
- (A) Clears entries from relation
 - (B) Deletes relation
 - (C) Deletes particular tuple from relation
 - (D) All of the above
36. The logical design and the snapshot of the data at a given instant in time is known as
- (A) Instance and Relation
 - (B) Relation and Schema
 - (C) Domain and Schema
 - (D) Schema and Instance
37. For designing a normal RDBMS, which of the following normal forms is considered adequate?
- (A) 4NF
 - (B) 3NF
 - (C) 2NF
 - (D) 5NF
38. Which level of RAID refers to disk mirroring with block striping?
- (A) RAID level 1
 - (B) RAID level 2
 - (C) RAID level 0
 - (D) RAID level 3

39. A unit of storage that can store one or more records in a hash file organization is denoted as

- (A) buckets
- (B) disk pages
- (C) blocks
- (D) nodes

40. A unit of storage that can store one or more records in a hash file organization is denoted as

- (A) buckets
- (B) disk pages
- (C) blocks
- (D) nodes

41. A counting semaphore was initialized to 10. Then 6 P (wait) operations and 4 V (signal) operations were completed on this semaphore. The resulting value of the semaphore is

- (A) 0
- (B) 8
- (C) 10
- (D) 12

42. A critical section is a program segment

- (A) which should run in a certain specified amount of time
- (B) which avoids deadlocks
- (C) where shared resources are accessed
- (D) which must be enclosed by a pair of semaphore operations, P and V

43. Banker's algorithm is used

- (A) to prevent deadlock
- (B) to deadlock recovery
- (C) to solve the deadlock
- (D) None of the above

44. What is the fence register used for?

- (A) Disk protection
- (B) CPU protection
- (C) Memory protection
- (D) None of the above

45. A process which is copied from main memory to secondary memory on the basis of requirement is known as

- (A) demand paging
- (B) segmentation
- (C) paging
- (D) threads

46. Which of the following scheduling algorithms is preemptive scheduling?

- (A) FCFS scheduling
- (B) SJF scheduling
- (C) Network scheduling
- (D) SRTF scheduling

47. A process executes the code

```
fork();  
fork();  
fork();
```

The total number of child processes created is

- (A) 3
- (B) 4
- (C) 7
- (D) 8

48. Consider the set of 5 processes (FCFS) whose arrival time and burst time are given below :

Process Id	Arrival time	Burst time
P1	3	4
P2	5	3
P3	0	2
P4	5	1
P5	4	3

What is average waiting time?

- (A) 2.3 units
(B) 3.2 units
(C) 4.9 units
(D) 3.9 units
49. UNIX is written in which language?
- (A) C++
(B) C
(C) C#
(D) .NET
50. A system program that combines the separately compiled modules of a program into a form suitable for execution is known as
- (A) assembler
(B) linking loader
(C) cross compiler
(D) load and go

51. Which of the following are examples of stateful application layer protocols?

- (i) HTTP
(ii) FTP
(iii) TCP
(iv) POP3
(A) (i) and (iv)
(B) (ii) and (iii)
(C) (ii) and (iv)
(D) (iii) and (iv)

52. Which one of the following uses UDP as the transport protocol?

- (A) TELNET
(B) ARP
(C) HTTP
(D) DNS

53. Protocol where each frame begins with at least two SYN characters is

- (A) HDLC
(B) BISYNC
(C) DHCP
(D) SMTP

54. An organization has a class B network and wishes to form subnets for 64 departments. The subnet mask would be

- (A) 255.255.0.0
(B) 255.255.64.0
(C) 255.255.128.0
(D) 255.255.252.0

55. Choose the best match between Group—1 and Group—2

Group—1

Group—2

- | | |
|--------------------|---|
| P. Data Link Layer | 1. Ensures reliable transport of data over a physical point-to-point link |
| Q. Network Layer | 2. Encoder/Decoder data for physical transmission |
| R. Transport Layer | 3. Allows end-to-end communication between two processes |
| S. Session Layer | 4. Routes data from one network node to the next |

(A) P-1, Q-4, R-3

(B) P-2, Q-4, R-1

(C) P-2, Q-3, R-1

(D) P-1, Q-3, R-2

56. What is split horizon?

- (A) Information about a route should not be sent back in the direction from which the original update came
- (B) It splits the traffic when you have a large bus (horizon) physical network
- (C) It holds the regular updates from broadcasting to a downed link
- (D) It prevents regular update messages from reinstating a route that has gone down

57. Error detection at data link layer is achieved by

- (A) Stuffing
- (B) Cyclic redundancy code
- (C) Humming code
- (D) Equalization

58. 'BAUD' rate means

- (A) the number of bits transmitted per unit time
- (B) the number of bytes transmitted per unit time
- (C) the rate at which the signal changes per second
- (D) None of the above

59. A _____ is a networking device that connects all of the devices on the network to transport data to another device.

- (A) switch
- (B) hub
- (C) router
- (D) modem

60. The data link layer consists of how many sub layers?

- (A) 2
- (B) 3
- (C) 4
- (D) 5

61. Why is the complexity of Bresenham's line drawing algorithm less than that of DDA line drawing algorithm?

- (A) It uses floating point operations over integer addition and subtraction
- (B) It considers only selected ranged inputs
- (C) It uses integer addition and subtraction over floating point operations
- (D) None of the above

62. Which of the following is **not** a limitation of the DDA algorithm?

- (A) It cannot draw lines with slopes greater than 1
- (B) It cannot draw lines with slopes less than -1
- (C) It cannot draw lines with slopes between 0 and 1
- (D) It cannot draw lines with slopes between -1 and 0

63. Which of the following is the most commonly used graphic input device for drawing and manipulating graphical objects?

- (A) Mouse
- (B) Touchscreen
- (C) Joystick
- (D) Stylus

64. Which of the following is the purpose of the error term in the DDA algorithm?

- (A) To ensure that the line is drawn correctly
- (B) To improve the accuracy of the line
- (C) To reduce the computational cost of drawing the line
- (D) To determine the next pixel to be plotted

65. What is rotation in 2-D transformation?

- (A) Moving an object without changing its position or size
- (B) Turning an object around a fixed point
- (C) Increasing or decreasing the size of an object
- (D) Changing the shape of an object

66. What is a joystick used for in computer graphics?

- (A) Simulating movement in games and simulations
- (B) Controlling the camera in virtual environments
- (C) Providing haptic feedback in virtual environments
- (D) Navigating through menus and options in graphical applications

67. Which of the following is the most common hidden line and surface removal algorithm?

- (A) Painter's algorithm
- (B) Z-buffer algorithm
- (C) BSP tree algorithm
- (D) Octree algorithm

68. In reflection transformation, the size of the object does not change.

- (A) True
- (B) False
- (C) Can be true or false
- (D) Cannot say

69. Which of the following is the purpose of the error term in the DDA algorithm?

- (A) To ensure that the line is drawn correctly
- (B) To improve the accuracy of the line
- (C) To reduce the computational cost of drawing the line
- (D) To determine the next pixel to be plotted

70. What is scaling in 2-D transformation?

- (A) Moving an object without changing its position or orientation
- (B) Rotating an object around a fixed point
- (C) Increasing or decreasing the size of an object
- (D) Changing the shape of an object

71. What is the purpose of the requirements gathering phase of the SDLC?

- (A) To identify the needs of the users
- (B) To design the software
- (C) To write the code
- (D) To test the software

72. What are the challenges of managing a software project that is using an agile methodology?

- (A) Agile projects are often more difficult to plan and manage than traditional waterfall projects
- (B) Agile projects often require more communication and collaboration between team members
- (C) Agile projects are often more susceptible to change
- (D) All of the above

73. What are the three main types of system analysis?

- (A) Structured analysis, object-oriented analysis and data-oriented analysis
- (B) Functional analysis, non-functional analysis and performance analysis
- (C) Requirements analysis, design analysis and testing analysis
- (D) Data flow analysis, decision analysis and risk analysis

74. What is the purpose of a Data Flow Diagram (DFD)?

- (A) To represent the flow of data through a system
- (B) To identify the entities and processes in a system
- (C) To define the relationships between entities and processes in a system
- (D) To document the requirements of a system

75. What is the first step in the Software Development Life Cycle (SDLC)?

- (A) Feasibility study
- (B) Preliminary investigation and analysis
- (C) System design
- (D) Coding

76. What are the different techniques that can be used for system analysis?

- (A) Data Flow Diagrams (DFDs), entity-relationship diagrams (ERDs) and use cases
- (B) Interviews, questionnaires and observation
- (C) Brainstorming, prototyping and modeling
- (D) All of the above

77. What is the difference between testing and validation?

- (A) Testing is the process of finding defects in software, while validation is the process of ensuring that software meets its requirements
- (B) Testing is a technical activity, while validation is a management activity
- (C) Testing is typically performed by testers, while validation is typically performed by developers
- (D) All of the above

78. What are some of the common test case design techniques?

- (A) Equivalence partitioning, boundary value analysis and decision tables
- (B) Exploratory testing, pairwise testing and user acceptance testing
- (C) Smoke testing, sanity testing and regression testing
- (D) All of the above

79. What are the different types of CASE tools?

- (A) Upper CASE tools, lower CASE tools and integrated CASE tools
- (B) Forward CASE tools, reverse CASE tools and reengineering CASE tools
- (C) Static CASE tools and dynamic CASE tools
- (D) All of the above

80. Which of the following is a good example of a module with high cohesion?

- (A) A module that performs multiple unrelated tasks
- (B) A module that has a lot of global variables
- (C) A module that is tightly coupled to other modules
- (D) A module that performs a single well-defined task

81. What is the difference between a module and a component?

- (A) A module is a software unit that performs a specific task, while a component is a physical unit that can be plugged into a system
- (B) A module is a static entity, while a component is a dynamic entity
- (C) A module is a high-level concept, while a component is a low-level concept
- (D) There is no difference between a module and a component

82. Which of the following is **not** a phase of the Software Development Life Cycle (SDLC)?

- (A) Requirements Gathering
- (B) Implementation
- (C) Deployment
- (D) Testing

83. What is the purpose of software testing?

- (A) To find bugs in the software
- (B) To ensure that the software meets its requirements
- (C) To make sure that the software is easy to use
- (D) To improve the quality of the software

84. Which property of software modularity is **incorrect** with respect to benefits software modularity?

- (A) Modules are robust
- (B) Module can use other modules
- (C) Modules can be separately compiled and stored in a library
- (D) Modules are mostly dependent

85. _____ is/are a measure/measures of the degree of interdependence between modules.

- (A) Cohesion
- (B) Coupling
- (C) None of the above
- (D) All of the above

86. What are the input and output of an NLP system?

- (A) Speech and noise
- (B) Speech and written text
- (C) Noise and written text
- (D) Noise and value

87. Which of the following is used for mapping sentence plan into sentence structure?

- (A) Text planning
- (B) Sentence planning
- (C) Text realization
- (D) None of the above

88. A* algorithm is based on

- (A) Breadth-First Search
- (B) Depth-First Search
- (C) Best-First Search
- (D) Hill climbing

89. Best-First Search is a type of informed search, which uses _____ to choose the best next node for expansion.

- (A) evaluation function returning lowest evaluation
- (B) evaluation function returning highest evaluation
- (C) evaluation function returning lowest and highest evaluations
- (D) None of the above

90. Heuristic function $h(n)$ is

- (A) lowest path cost
- (B) cheapest path from root to goal node
- (C) estimated cost of cheapest path from root to goal node
- (D) average path cost

91. What is the space complexity of Greedy search?

- (A) $O(b)$
- (B) $O(bl)$
- (C) $O(m)$
- (D) $O(bm)$

92. Which of the following is **not** Capabilities of Expert Systems?

- (A) Advising
- (B) Demonstrating
- (C) Explaining
- (D) Expanding

93. Which of the following is **not** the commonly used programming language for Artificial Intelligence?

- (A) Perl
- (B) Java
- (C) PROLOG
- (D) LISP

94. Which of the following produces hypotheses that are easy to read for humans?

- (A) Machine learning
- (B) ILP
- (C) First-order logic
- (D) Propositional logic

95. Which of the following is **not** a type of Artificial Intelligence agent?

- (A) Learning AI agent
- (B) Goal-based AI agent
- (C) Simple reflex AI agent
- (D) Unity-based AI agent

96. When will Hill climbing algorithm terminate?

- (A) Stopping criterion met
- (B) Global Min/Max is achieved
- (C) No neighbor has higher value
- (D) All of the above

97. Hill climbing is sometimes called _____ because it grabs a good neighbor state without thinking ahead about where to go next.

- (A) needy local search
- (B) heuristic local search
- (C) greedy local search
- (D) optimal local search

98. The process of removing detail from a given state representation is called

- (A) extraction
- (B) abstraction
- (C) information retrieval
- (D) mining of data

99. What is/are the major component/ components for measuring the performance of problem solving?

- (A) Completeness
- (B) Optimality
- (C) Time and Space complexity
- (D) All of the above

100. Which search method takes less memory?

- (A) Depth-First Search
- (B) Breadth-First Search
- (C) Linear Search
- (D) Optimal Search

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