Code No: 54016 **Set No. 1**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. II Sem., II Mid-Term Examinations, APRIL – 2014
DESIGN AND ANALYSIS OF ALGORITHMS
Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. If there are ***n*** nodes, then the possible binary search trees are _____ [ ]
(a) $(n+1)2nc_n$ (b) $\frac{1}{n+1}2nc_n$ (c) $(n-1)2nc_n$ (d) $\frac{1}{n-1}2nc_n$

2. Let A1=5 X 4, A2=4 X 6, A3=6 X 2 then the minimum number of multiplications are __ [ ]
(a) 180 (b) 88 (c) 128 (d) None

3. Two queens are lie on the same diagonal if and only if [ ]
(a) |j-l|=|i-k| (b) |j-l|=|i+k| (c) |j+l|=|i+k| (d) |j+l|=|i-k|

4. Time Complexity of Graph Coloring Problem is [ ]
(a) $O(n.m^n)$ (b) $O(n^2)$ (c) O(n) (d) None

5. The live nodes whose children are currently being generated is _____ [ ]
(a) Live node (b) E-node (c) Dead node (d) State Node

6. Travelling Sales Person problem is to find a _____ [ ]
(a) Tour of minimum cost (b) tour of Maximum cost (c) cost (d) None

7. If an NP complete problem is solvable in polynomial time then_____ [ ]
(a) P=NP (b) P $\neq$ NP (c) P (d) NP

8. The Halting problem is to determine for an arbitrary_____ [ ]
(a) NP-Complete (b) Non-Deterministic Algorithm
(c) P Complete (d) Deterministic Algorithm

9. Two problems L1 and L2 are said to be polynomially equivalent iff _____ [ ]
(a) L1 = L2 & L2 = L1 (b) L1 $\neq$ L2 & L2 $\neq$ L1 (c) L1 $\propto$ L2 & L2 $\propto$ L1 (d) none

10. The minimum number of colors needed to color a graph having n (=4) vertices and 2 edges is_____ [ ]
(a) 2 (b) 3 (c) 1 (d) 4

Cont.....2

II Fill in the blanks:

11. The number of possible binary trees with 4 nodes is _____
12. In all pairs shortest path problem, the shortest path between _____ in a Graph
13. The placement of the each queen on the chess board was chosen _____
14. Sum of the subset Problem based on _____
15. Branch and Bound refers to _____
16. In reduced Cost Matrix, A matrix is reduced iff_____
17. NP stands for _____
18. A Problem L is NP complete iff _____
19. $S^i=S^{i-1}+S_1^i$ is used for solving 0/1 Knapsack problem is it TRUE or FALSE _____
20. LC search with Bounding Function is _____

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Code No: 54016 **Set No. 2**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. II Sem., II Mid-Term Examinations, APRIL – 2014
DESIGN AND ANALYSIS OF ALGORITHMS
Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. Time Complexity of Graph Coloring Problem is [ ]
(a) $O(n.m^n)$ (b) $O(n^2)$ (c) O(n) (d) None

2. The live nodes whose children are currently being generated is _____ [ ]
(a) Live node (b) E-node (c) Dead node (d) State Node

3. Travelling Sales Person problem is to find a _____ [ ]
(a) Tour of minimum cost (b) tour of Maximum cost (c) cost (d) None

4. If an NP complete problem is solvable in polynomial time then_____ [ ]
(a) P=NP (b) P ≠ NP (c) P (d) NP

5. The Halting problem is to determine for an arbitrary_____ [ ]
(a) NP-Complete (b) Non-Deterministic Algorithm
(c) P Complete (d) Deterministic Algorithm

6. Two problems L1 and L2 are said to be polynomially equivalent iff _____ [ ]
(a) L1 = L2 & L2 = L1 (b) L1 ≠ L2 & L2 ≠ L1 (c) L1 ∝ L2 & L2 ∝ L1 (d) none

7. The minimum number of colors needed to color a graph having n (=4) vertices and 2 edges is_____ [ ]
(a) 2 (b) 3 (c) 1 (d) 4

8. If there are ***n*** nodes, then the possible binary search trees are _____ [ ]
(a) $(n+1)2nc_n$ (b) $\frac{1}{n+1}2nc_n$ (c) $(n-1)2nc_n$ (d) $\frac{1}{n-1}2nc_n$

9. Let A1=5 X 4, A2=4 X 6, A3=6 X 2 then the minimum number of multiplications are __ [ ]
(a) 180 (b) 88 (c) 128 (d) None

10. Two queens are lie on the same diagonal if and only if [ ]
(a) |j-l|=|i-k| (b) |j-l|=|i+k| (c) |j+l|=|i+k| (d) |j+l|=|i-k|

Cont……2

II Fill in the blanks:

11. Sum of the subset Problem based on _____
12. Branch and Bound refers to _____
13. In reduced Cost Matrix, A matrix is reduced iff_____
14. NP stands for _____
15. A Problem L is NP complete iff _____
16. $S^i=S^{i-1}+S_1^i$ is used for solving 0/1 Knapsack problem is it TRUE or FALSE _____
17. LC search with Bounding Function is _____
18. The number of possible binary trees with 4 nodes is _____
19. In all pairs shortest path problem, the shortest path between _____ in a Graph
20. The placement of the each queen on the chess board was chosen _____

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Code No: 54016 **Set No. 3**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. II Sem., II Mid-Term Examinations, APRIL – 2014
DESIGN AND ANALYSIS OF ALGORITHMS
Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. Travelling Sales Person problem is to find a _____ [ ]
(a) Tour of minimum cost (b) tour of Maximum cost (c) cost (d) None

2. If an NP complete problem is solvable in polynomial time then_____ [ ]
(a) P=NP (b) P ≠ NP (c) P (d) NP

3. The Halting problem is to determine for an arbitrary_____ [ ]
(a) NP-Complete (b) Non-Deterministic Algorithm
(c) P Complete (d) Deterministic Algorithm

4. Two problems L1 and L2 are said to be polynomially equivalent iff _____ [ ]
(a) L1 = L2 & L2 = L1 (b) L1 ≠ L2 & L2 ≠ L1 (c) L1 ∝ L2 & L2 ∝ L1 (d) none

5. The minimum number of colors needed to color a graph having n (=4) vertices and 2 edges is_____ [ ]
(a) 2 (b) 3 (c) 1 (d) 4

6. If there are ***n*** nodes, then the possible binary search trees are _____ [ ]
(a) $(n+1)2nc_n$ (b) $\frac{1}{n+1}2nc_n$ (c) $(n-1)2nc_n$ (d) $\frac{1}{n-1}2nc_n$

7. Let A1=5 X 4, A2=4 X 6, A3=6 X 2 then the minimum number of multiplications are __ [ ]
(a) 180 (b) 88 (c) 128 (d) None

8. Two queens are lie on the same diagonal if and only if [ ]
(a) |j-l|=|i-k| (b) |j-l|=|i+k| (c) |j+l|=|i+k| (d) |j+l|=|i-k|

9. Time Complexity of Graph Coloring Problem is [ ]
(a) $O(n.m^n)$ (b) $O(n^2)$ (c) O(n) (d) None

10. The live nodes whose children are currently being generated is _____ [ ]
(a) Live node (b) E-node (c) Dead node (d) State Node

Cont……2

II Fill in the blanks:

11. In reduced Cost Matrix, A matrix is reduced iff_____
12. NP stands for _____
13. A Problem L is NP complete iff _____
14. $S^i=S^{i-1}+S_1^i$ is used for solving 0/1 Knapsack problem is it TRUE or FALSE _____
15. LC search with Bounding Function is _____
16. The number of possible binary trees with 4 nodes is _____
17. In all pairs shortest path problem, the shortest path between _____ in a Graph
18. The placement of the each queen on the chess board was chosen _____
19. Sum of the subset Problem based on _____
20. Branch and Bound refers to _____

-oOo-

Code No: 54016 **Set No. 4**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
II B.Tech. II Sem., II Mid-Term Examinations, APRIL – 2014
DESIGN AND ANALYSIS OF ALGORITHMS
Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I Choose the correct alternative:

1. The Halting problem is to determine for an arbitrary_____ [ ]
   (a) NP-Complete (b) Non-Deterministic Algorithm
   (c) P Complete (d) Deterministic Algorithm

2. Two problems L1 and L2 are said to be polynomially equivalent iff _____ [ ]
   (a) L1 = L2 & L2 = L1 (b) L1 $\neq$ L2 & L2 $\neq$ L1 (c) L1 $\propto$ L2 & L2 $\propto$ L1 (d) none

3. The minimum number of colors needed to color a graph having n (=4) vertices and 2 edges is_____ [ ]
   (a) 2 (b) 3 (c) 1 (d) 4

4. If there are ***n*** nodes, then the possible binary search trees are _____ [ ]
   (a) $(n+1)2nc_n$ (b) $\frac{1}{n+1}2nc_n$ (c) $(n-1)2nc_n$ (d) $\frac{1}{n-1}2nc_n$

5. Let A1=5 X 4, A2=4 X 6, A3=6 X 2 then the minimum number of multiplications are __ [ ]
   (a) 180 (b) 88 (c) 128 (d) None

6. Two queens are lie on the same diagonal if and only if [ ]
   (a) |j-l|=|i-k| (b) |j-l|=|i+k| (c) |j+l|=|i+k| (d) |j+l|=|i-k|

7. Time Complexity of Graph Coloring Problem is [ ]
   (a) $O(n.m^n)$ (b) $O(n^2)$ (c) O(n) (d) None

8. The live nodes whose children are currently being generated is _____ [ ]
   (a) Live node (b) E-node (c) Dead node (d) State Node

9. Travelling Sales Person problem is to find a _____ [ ]
   (a) Tour of minimum cost (b) tour of Maximum cost (c) cost (d) None

10. If an NP complete problem is solvable in polynomial time then_____ [ ]
    (a) P=NP (b) P $\neq$ NP (c) P (d) NP

Cont.....2

II Fill in the blanks:

11. A Problem L is NP complete iff _____
12. $S^i=S^{i-1}+S_1^i$ is used for solving 0/1 Knapsack problem is it TRUE or FALSE _____
13. LC search with Bounding Function is _____
14. The number of possible binary trees with 4 nodes is _____
15. In all pairs shortest path problem, the shortest path between _____ in a Graph
16. The placement of the each queen on the chess board was chosen _____
17. Sum of the subset Problem based on _____
18. Branch and Bound refers to _____
19. In reduced Cost Matrix, A matrix is reduced iff_____
20. NP stands for _____

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