K22U 0343

Reg. No. : .....

Name : .....

VI Semester B.C.A. Degree (CBCSS – OBE – Regular) Examination, April 2022
(2019 Admission)
Core Course
6B17BCA : DESIGN AND ANALYSIS OF ALGORITHM

Time : 3 Hours Max. Marks : 40

PART – A
Short Answer

Answer **all** questions : (6×1=6)

1. Define Algorithm.
2. How many multiplications are used in Strassen's Matrix Multiplication algorithm ?
3. Which method is used for 8 queen's problem ?
4. What do you mean by best case of an algorithm ?
5. What is the time complexity of Prim's algorithm ?
6. Define backtracking.

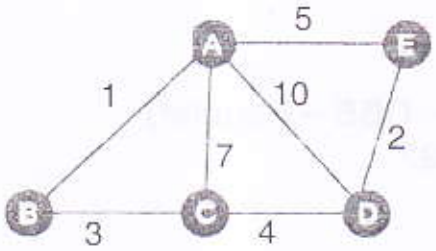
PART – B
Short Essay

Answer **any 6** questions : (6×2=12)

7. What are average case and worst-case analysis of an algorithm ?
8. Define Iteration method for solving a recurrence.
9. Write-down algorithm for Binary search.
10. Explain any one sorting algorithm to sort an array.
11. What is the importance of algorithm analysis ?
12. Define Big oh notation.

P.T.O.

13. Calculate the cost of MST of the given graph using Kruskal's algorithm.



14. Write down Prim's algorithm.

PART – C
Essay

Answer **any 4** questions : **(4×3=12)**

15. What are the steps in developing algorithm ?
16. Explain Pseudo code method of specifying an algorithm with example.
17. What is greedy algorithm ? Explain with one example.
18. What is time complexity of an algorithm ?
19. Explain problem solving using master's theorem.
20. What is Huffman coding ? Explain.

PART – D
Long Essay

Answer **any 2** questions : **(2×5=10)**

21. Explain Divide and Conquer approach of an algorithm.
22. Explain Asymptotic Notations.
23. What is Recurrence Relation ? Explain Substitution method for solving recurrence with example.
24. Explain Strassen's Matrix Multiplication.
