



THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)
Re-accredited (2nd Cycle) by NAAC with Grade “A”, CGPA – 3.46 on a 4-point scale

Backlog Arrear Examination, March 2021

MCA 4422
Design and Analysis of algorithms

Max:75marks
Time:3 hours

Answer any FIVE of the Following:

5*15=75

1. What do you mean “STACK” ? explain it with its operations
2. Explain the single linked list with its operations
- 3.. Write an algorithm for insertion on Red-Black tree? Brief it
- 4.. Explain divide and conquer approach and discuss it with the merge sort.
5. Obtain shortest path of the graph by Bellmen-ford algorithm
6. Write Algorithm and explain Dijkstra’s Algorithm with the help of suitable example?
- 7.. Illustrate 8-Queens problem with example?