

THAKUR COLLEGE OF ENGINEERING & TECHNOLOGY

utonomous College Affiliated to University of Mumbai pproved by All India Council for Technical Education(AICTE) and Government of Maharashtra(GoM) inferred Autonomous Status by University Grants Commission (UGC) for 10 years w.e.f. A.Y 2019-20 mongst Top 200 Colleges in the Country, Ranked 193" in NIRF India Ranking 2019 in Engineering College catego ISO 9001:2015 Certified • Programmes Accredited by National Board of Accreditation (NBA), New Delhi

In semester Assessment ST- (Semester-IV) Design and Analysis of Algorithms

Branch: AIML Date: 21/03/2022

Div.: A Timing: 2.30 pm to 3:30 pm Duration: I hour Maximum Marks: 20

 $Instructions \, - \,$

1. All questions are compulsory

2. Assume suitable data wherever necessary and state the assumptions made.

3. Diagrams / sketches should be given wherever necessary.

4. Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.

5. Figures to the right indicate full marks.

6. Scan the answer sheet in sequence and upload the Pdf. Pdf should be named as ST_AIML_ Roll No_Subject abbreviation_Student Name

Q.1) Objective Questions (10M)

Solve any 10 questions out of 12. (Each question carries 1 Mark)

https://forms.gle/PGYbcYNGk1iwPrgy6

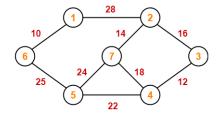
Q2 a) Write differences between Greedy and Dynamic method of problem solving. Give examples for each. [5 marks]

OR

Q2 b) Explain with example how dynamic programming approach is different from recursion?

[5 marks]

Q3 a) What is a Minimum Spanning Tree (MST)? Construct a MST for the given graph using Kruskal's Algorithm. Calculate the weight of MST. [5 marks]



OR

Q3 b). Consider the following directed weighted graph. Find the shortest path distance between every pair of vertices using Floyd Warshall Algorithm. [5 marks]

