

Zagdu Singh Charitable "Trust's (Regd.) THAKUR COLLEGE OF

ENGINEERING & TECHNOLOGY

Autonomous College Affiliated to University of Mumbai Approved by All India Council for Technical Education(AICTE) and Government of Maharashtra(GoM)

Conferred Autonomous Status by University Grants Commission (UGC) for 10 years w.e.f. A.Y 2019-20
Amongst Top 200 Colleges in the Country, Rankfed 193' in NIRKF India Rankfing 2019 in Engineering College category
* ISO 9001:2015 Certified * Programmes Accredited by NaVineed Board of Accreditation (NBA), New Delhi

In semester Assessment ST- (Semester-IV) **Database Management System**

Branch: AIML Date: 14/02/2022

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/hVsMai6zBFFfmSWu7

Q2 a) Illustrate Asymptotic Notations with examples to each.

[5 marks]

- Q2 b) Describe the characteristics of an algorithm. Differentiate algorithm and program [5 marks]
- Q3 a) Explain insertion sort algorithm and estimate its best case and worst case time complexity.

[5 marks]

Q3 b) Perform binary search on list of elements to find the key element using divide and conquer and also derive its time complexity using recursion tree method.

[5 marks]