



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.															
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Mid - Term Examinations - MARCH 2026

Date: 10-03-2026

Time: 09:30am - 11:00am

School: SOCSE	Program: B.Tech		
Course Code: CSE2262	Course Name: Analysis of Algorithms		
Semester: IV	Max Marks: 50	Weightage: 25%	

CO - Levels	C01	C02	C03	C04	C05
Marks	12	38	----	----	----

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

5Q x 2M=10M

1	List the different basic efficiency classes used for analysis of an algorithm.	2 Marks	L1	C01
2	Explain the concept of decrease and conquer in brief.	2 Marks	L2	C02
3	Apply backward substitution method for the following recurrence equation. $X(n)=x(n-1)+1$ and obtain its big-oh. Assume $x(1)=0$.	2 Marks	L1	C02
4	State the best case scenario of Quick Sort algorithm.	2 Marks	L2	C02
5	List any 2 major differences between decrease and conquer and divide and conquer technique.	2 Marks	L2	C02

Part B

Answer the Questions.

Total Marks 40M

6.	a.	Explain asymptotic notations in detail.	10 Marks	L2	C01
Or					
7.	a.	Write a sorting algorithm which sorts based on elements using brute force technique. Also do its analysis.	10 Marks	L2	C01
Or					
8.	a.	Write a sorting algorithm which sorts based on elements using divide and conquer technique. Also find its time complexity.	10 Marks	L2	C02
Or					
9.	a.	Write brute force string matching algorithm and also obtain its time complexity.	10 Marks	L2	C02
Or					
10.	a.	Write a sorting algorithm which sorts based on position using divide and conquer technique. Also find its time complexity.	10 Marks	L2	C02
Or					
11.	a.	Apply quick sort to the following elements and also write its recurrence tree. P, R, E, S, I, D, E, N, C, Y	10 Marks	L3	C02
Or					
12.	a.	Write a sorting algorithm which uses decrease by one technique and also do its analysis.	10 Marks	L2	C02
Or					
13.	a.	Describe the general method of solving any problem using decrease and conquer technique. Also explain its three types of decreasing the problem size in detail.	10 Marks	L2	C02