PRN:	

Course Code :	AMT1503

Third Year **B. Tech** End Semester Examination Winter 2022

Design and Analysis of Algorithms

Day and Date: Saturday, 17.12.22 Max Marks: **100**

Time : 10.30am -1.30pm Duration: **03** hrs

Instructions: All questions are compulsory.

		Marks	Bloom's Level	CO
Q.1	**Attempt the following**			
	a) What is Growth of Functions Solving Recursive Equation.	08	L1	CO2
	b) Explain Stassen's Matrix Multiplication concept	08	L2	CO4
	OR			
	b) Compare Substitution Method and Iteration Method.	08	L5	CO2
Q.2	**Attempt the following**			
	a) Extend Greedy Approch .Explain by giving one Example	08	L2	CO1
	b) What is Prim's Algorithm .Define it in detail.	08	L1	CO3
	OR			
	b) Maximize Single Source Shortest Path	08	L4	CO2
Q.3	**Attempt any two from the following**			
	a) Make use of one example to explain Travelling Salesman Problem	08	L3	CO2
	b) Apply and explain Reliability Design by considering one example.	08	L3	CO1
	c) Explain Optimal Binary Search Algorithm.	08	L5	CO1
Q.4	**Attempt any two from the following**			
	a) What is 8- Queens Problem? Define it.	08	L1	CO3
	b) Simplify sum of Subset Problem.	08	L4	CO2
	c) Elaborate Branch and Bounce Knapsack Problem	08	L2	CO1
Q.5	**Attempt any Two of the following**			
	a) Recall Rabin-karp Algorithm.	09	L1	CO3
	b) Summarize Naïve String-matching Algorithm.	09	L2	CO1
	c) Determine Packet Routing Concept.	09	L5	CO1
Q.6	**Attempt any Two of the following**			
	a) Compare NP and NP Hard	09	L2	CO4
	b) Discuss Clique Decision Problem.	09	L3	CO2
	c) Justify Chromatic Number Decision Problem	09	L5	CO2

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