[M19CST1107]

I M. Tech I Semester (R19) Regular Examinations
OPTIMIZATION TECHNIQUES
Department of Computer Science and Engineering
MODEL QUESTION PAPER

TIME: 3 Hrs. **Max. Marks: 75 M**

Answer **ONE Question** from **EACH UNIT**
All questions carry equal marks
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			CO	KL	M
		UNIT - I			
1.	a).	State the optimization problem. Classify and explain varis types of optimization problems with examples	1	2	8
	b).	Explain typical applications of operation research in industry	1	2	7
		OR			
2.	a).	Discuss the varis phases in solving an operations research problem.	1	3	8
	b).	State necessary & Sufficient conditions for multivariable optimization problem witht constraints	1	2	7
		UNIT - II			
3.	a).	Discuss abt graphical solution revised simplex method	1	2	7
	b).	What is dual simplex method? explain in detail	1	2	8
		OR			
4.	a).	Solve the following LPP by simplex method Minimize $Z = -6x1 - 2x2 - 6x3$ subject to $2x1 - 3x2 + x3 \leq 14$ $-4x1 + 4x2 + 10x3 \leq 46$ $2x1 + 2x2 - 4x3 \leq 37$ $x1 \geq 2x2 \geq 1x3 \geq 3$	2	3	7
	b).	Explain dual simplex method	2	2	8
		UNIT - III			
5.	a).	Compare transportation problem with simplex method	2	2	7
	b).	Explain Kuhn-Tucker conditions min cost flow problem	2	2	8
		OR			
6.	a).	Explain max flow problem in detail	2	3	8
	b).	Explain Nonlinear programming problem	2	2	7
		UNIT - IV			
7.	a).	Discuss abt geometric programming	3	2	8
	b).	Briefly discuss abt scheduling and sequencing	3	3	7
		OR			
8.	a).	Explain different multi server models	3	2	8
	b).	Explain deterministic inventory models	3	2	7
		UNIT - V			
9.	a).	What is dynamic Programming? explain in detail	4	2	7
	b).	Explain abt Game theory simulation	4	2	8
		OR			
10.	a).	Explain abt single channel problem model	4	2	8
	b).	Discuss abt Elementary graph theory	4	2	7