

LESSON PLAN

Subject: Operations research

Year- Sem : III-II Mech-B

A.Y: 2016-17

Period		Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks
5,6	2	07.12.2016	Introduction to operations research, History, Definition, OR models, Phases of OR	I	Class Room	
1,2	4	09.12.2016	Introduction to linear programming problem formulation	I	Class Room	
5,6	6	14.12.2016	Introduction to Graphical solution, Problems of Graphical solution	I	Class Room	
1,2	8	16.12.2016	Simplex procedure for solving LPP formulation	I	Class Room	
5,6	10	21.12.2016	Problems on simplex method	I	Class Room	
1,2	12	23.12.2016	Artificial variables technique: 1. Big-M method, 2. Two phase method	I	Class Room	
5,6	14	28.12.2016	Problems on Unrestricted variables, Problem of Degeneracy	I	Class Room	
1,2	16	30.12.2016	Transportation problem Formulation, Methods for IBFS	II	Class Room	
5,6	18	04.01.2016	Testing IBFS for Optimality	II	Class Room	
1,2	20	06.01.2016	Unbalanced Transportation problem, Problem of Degeneracy	II	Class Room	
5,6	22	11.01.2016	Formulation of Assignment problem, Hungarian method for Optimal solutions	II	Class Room	
5,6	24	18.01.2016	Unbalanced Assignment problems, variations in Assignment problem, travelling salesman problem	II	Class Room	
		19.01.2017 to 23.01.2017	Mid examination-I			
5,6	26	25.01.2016	Introduction to Sequencing, Problems with n jobs and two machines	III	Class Room	

1,2	28	27.01.2017	Problems with n jobs and three machines, Problems with n - jobs and m - machines (graphic solution)	III	Class Room	
5,6	30	01.02.2017	Introduction to queuing theory, Characteristics of Queuing models, Classification, problem on $(M/M/1:(FCFS/\infty/\infty))$	III	Class Room	
1,2	32	03.02.2017	Problem on $(M/M/1:(FCFS/N/\infty))$, Problem on $(M/M/C:(FCFS/\infty/\infty))$	III	Class Room	
5,6	34	08.02.2017	Introduction to Replacement, Replacement of items that deteriorate with time value of money unchanging	IV	Class Room	
1,2	36	10.02.2017	Problems when money value is changing	IV	Class Room	
5,6	38	15.02.2017	Replacement of items that fail completely	IV	Class Room	
1,2	40	17.02.2017	Introduction to theory of games, Two-person Zero-sum games, Maximum- Minimax principle, Games without saddle points,	IV	Class Room	
5,6	42	22.02.2017	Problems using Dominance property		Class Room	
		01.03.2017 to 03.03.2017	Mid examination-II	IV		
5,6	44	08.03.2017	Graphical solution to $m \times 2$ & $2 \times n$ games	IV	Class Room	
1,2	46	10.03.2017	Algebraic solutions to rectangular games	IV	Class Room	
5,6	48	15.03.2017	Introduction to network models, Project network, CPM and PERT	V	Class Room	
1,2	52	17.03.2017	Problems on CPM	V	Class Room	
5,6	54	22.03.2017	Problems on CPM	V	Class Room	
1,2	56	24.03.2017	Problems on PERT	V	Class Room	
5,6	58	29.03.2017	Cost considerations in project scheduling	V	Class Room	
1,2	60	31.03.2017,	Revision	I,II	Class Room	
1,2	62	07.04.2017	Revision	II,IV,V	Class Room	

