Lesson Plan

Name of Institute   : Ambala College of Engineering and Applied Research
Name of the Faculty member   : Dr S. K. Jain
Discipline   : Mechanical Engineering
Semester   : 6th
Subject   : Operation Research (ME-306N)
Lesson Plan Duration   : 15 weeks (from January 2020 to April 2020)
Work Load   : 3L   1T   0P

Week	Theory		Practical	
	Lecture day	Topic (including assignment/ test)	Practical day	Topic
1st	1	Introduction to OR, origin, development		
	2	Model formulation		
	3	Graphical solution		
	4	Various problems		
2nd	1	Simplex method		
	2	Minimization problem		
	3	Big- M method		
	4	Special problems		
3rd	1	Degeneracy		
	2	Duality theory		
	3	Sensitivity analysis		
	4	Numerical on LPP		
4th	1	Numerical on LPP		
	2	Methods for solving Transportation model		
	3	VAM method		
	4	Sessional Test-1		
5th	1	MODI method		
	2	MODI method		
	3	Unbalanced transportation		
	4	Numerical Practice		
6th	1	Profit Maximization Problem		
	2	Degeneracy in transportation model		
	3	Least time transportation model		
	4	Numerical Practice		
7th	1	Assignment model		
	2	Formulation and solution		
	3	Variation in assignment model		
	4	Numerical Practice		
8th	1	Introduction to PERT and CPM, Fulkerson rule		
	2	Drawing of network		
	3	Pert calculations		
	4	Numerical Practice		
9th	1	Critical path method		

	2	Crashing of network			
	3	Assignment on Transportation and network			
	4	Numerical Practice			
10th	1	Simulation languages			
	2	Simulation techniques			
	3	Numerical Practice			
	4	Sessional Test-2			
11th	1	Decision theory under certainty			
	2	Decision theory under uncertainty			
	3	Decision tree			
	4	Numerical Practice			
12th	1	Basic queuing process			
	2	Queuing theory			
	3	Single channel queuing theory			
	4	Numerical Practice			
13th	1	Multi-channel queuing theory			
	2	Game theory, model formulation, saddle point,			
	3	dominance method, mixed strategy			
	4	Numerical Practice			
14th	1	Odd method			
	2	Graphical method			
	3	Sub game method			
	4	Numerical Practice			
15th	1	Assignment on Queue theory and Game theory			
	2	Revision			
	3	Revision			
	4	Sessional Test-3			

(Signature of the teacher concerned with date)