

## LESSON PLAN

Name of the faculty : Dr. Neetu Gupta

Discipline : EIC

Subject : Operational Research

Programme : B.Tech.

Semester : Eighth

Work Load for this Subject : 04 (Lectures) = 04 Hours/Week

Week	Lecture day	Topic (Excluding assignment and test)
1 <sup>st</sup>	1 <sup>st</sup>	Different types of O.R. models, their construction and general methods of solution.
	2 <sup>nd</sup>	Continue...
	3 <sup>rd</sup>	Continue...
	4 <sup>th</sup>	Linear Programming Problem-Formulation
2 <sup>nd</sup>	1 <sup>st</sup>	Graphical solution
	2 <sup>nd</sup>	Problems based on Graphical method
	3 <sup>rd</sup>	The Standard form of the L.P. Model
	4 <sup>th</sup>	Some Definitions related to solution of the L.P.P.
3 <sup>rd</sup>	1 <sup>st</sup>	The Simplex Method
	2 <sup>nd</sup>	Continue...
	3 <sup>rd</sup>	Problems based on the Simplex Method
	4 <sup>th</sup>	The dual of L.P.P.
4 <sup>th</sup>	1 <sup>st</sup>	Continue...
	2 <sup>nd</sup>	Theorems based on the duality
	3 <sup>rd</sup>	Primal dual relationship
	4 <sup>th</sup>	Dual simplex method
5 <sup>th</sup>	1 <sup>st</sup>	Continue...
	2 <sup>nd</sup>	Sensitivity analysis
	3 <sup>rd</sup>	Transportation Problem-its solution and applications
	4 <sup>th</sup>	Continue...
6 <sup>th</sup>	1 <sup>st</sup>	Continue...
	2 <sup>nd</sup>	Continue...
	3 <sup>rd</sup>	Transportation Problem -Problems for practice
	4 <sup>th</sup>	The assignment model
7 <sup>th</sup>	1 <sup>st</sup>	The assignment model-Problems for practice
	2 <sup>nd</sup>	Travelling salesman problem
	3 <sup>rd</sup>	Network Minimisation
	4 <sup>th</sup>	Continue...
8 <sup>th</sup>	1 <sup>st</sup>	Shortest route problem
	2 <sup>nd</sup>	Continue...

	3 <sup>rd</sup>	Maximum Flow Problem
	4 <sup>th</sup>	Continue...
9 <sup>th</sup>	1 <sup>st</sup>	Project of scheduling by PERT, CPM
	2 <sup>nd</sup>	Continue...
	3 <sup>rd</sup>	Continue...
	4 <sup>th</sup>	Problems of PERT ,CPM
10 <sup>th</sup>	1 <sup>st</sup>	Critical path calculations
	2 <sup>nd</sup>	Construction of the time chart and resource leveling
	3 <sup>rd</sup>	Continue...
	4 <sup>th</sup>	Continue...
11 <sup>th</sup>	1 <sup>st</sup>	Integer programming-examples, method and algorithms
	2 <sup>nd</sup>	Continue...
	3 <sup>rd</sup>	Continue...
	4 <sup>th</sup>	Dynamic programming – Examples of D.P. Models
12 <sup>th</sup>	1 <sup>st</sup>	Continue...
	2 <sup>nd</sup>	Continue...
	3 <sup>rd</sup>	Bellman’s principle of optimality
	4 <sup>th</sup>	Continue...
13 <sup>th</sup>	1 <sup>st</sup>	Continue...
	2 <sup>nd</sup>	Method of Recursive optimization
	3 <sup>rd</sup>	Continue...
	4 <sup>th</sup>	Problems based on Method of Recursive optimization