Lesson Plan

Name of Faculty : Harpreet Kaur, Assistant Professor
Discipline : Data Science
Semester : 5th (odd)
Subject : Graph Theory (PC/CDS/53-T)
Load (Lecture/Practical) per week (in hours): Lectures-03hours.

Week	Theory		Topic Covered Date and Remarks		
	Lecture Day	Topic(Including Assignment/Test)	Date	HOD	Director-Principal
1st	1	Introduction to graphs, Types of graphs			
	2	Bipartite and Isomorphic graphs examples			
	3	Applications			
2nd	4	Operations on Graphs			
	5	Walks, Path, Circuits			
	6	Euler Graphs,			
3rd	7	Hamiltonian Path and Circuits			
	8	Trees, Properties of Trees			
	9	Spanning Trees			
4th	10	Standard proofs			
	11	Revision			
	12	Cut-Sets, Properties of Cut-Set,			
5th	13	All Cut-Sets in a graph			
	14	Fundamental Circuits and Cut-Sets			
	15	Connectivity and Separability			
6th	16	Network Flows			
	17	1-Isomorphism			
	18	2- Isomorphism			
7th		**1stMinorTest**			
8th	19	Planar Graphs,			
	20	Kuratowski's Two Graphs			
	21	Revision			
9th	22	Sets with one operation, Sets with two operations			
	23	Modular Arithmetic and Galois Fields,			
	24	Vector and Vector Spaces,			
10th	25	Vector Space associated with a graph,			
	26	Basic Vectors of a graph			
	27	Circuits and Cut-Set Subspaces,			
11th	28	Orthogonal Vectors and Spaces,			
	29	Intersection and Join of W and Ws.			
	30	Revision			
12th	31	Matrix representation of graphs			
	32	Incidence Matrix			
	33	Sub matrices			
13th	34	Circuit Matrix			
	35	Fundamental Circuit Matrix and Rank			
	36	Coloring of graphs: Chromatic Number			
14th		**2ndMinorTest**			
15th	37	Vertex Coloring of graphs,			
	38	Edge Coloring of graphs,			
	39	Coloring of Planar Graphs, Revision			