Question Bank of Graph Theory for ESE

**Chapter 1:**

Graph& Types of graph

Application of Graph

bipartite graphs

**Chapter 2:**

Walks, trails, paths, cycles

Euler Graph

Dijkstra’s shortest

path algorithm and its application

Floyd-Warshall shortest path algorithm.

Applications-The Chinese Postman Problem, The Travelling Salesman Problem

**Chapter 3:**

**Tree & Its types**

**Properties of Tree**

Distance and Centers in a tree

**Spanning Trees, Kirchoff-matrix-**

**tree theorem,**

**Minimum spanning trees,**

**Kruskal’s algorithm,**

**Prim’s algorithm**

**Chapter 4:**

Connectivity and Separability, Matrix Representation, Adjacency

matrix, Incidence matrix, Circuit matrix, Cut-set matrix, Path Matrix, Properties(Refer PPT) imp

**Chapter 5: Vertex-colorings and planar graphs**

Graph Coloring,

Chromatic Number,

Chromatic Polynomial, Chromatic Partitioning,

Matching, Covering,

Edge colorings,

Planar Graphs: Basic concepts,

Euler’s formula and its consequences

Planarity testing, 5-Color- theorem( Refer PPT & Video Link) in PPT

**Chapter6: Applications of Graph Theory**

**Question will based on explaining importance of graph theory and usage of its concept in various field (refer ppt n video link in PPT)**

**Note:Study PPT and video link inside ppt for all chapter**

**For numeral refer ppt, Javatpoint, tutorialpoint and Gatevidyalal**

**For objective question study ppt in detail and online sites.**