

# 8 Lecture - CS502

## Important Mcqs

### 1. What is a graph?

- A. A visual representation of data
- B. A mathematical structure used to model relationships
- C. A type of tree
- D. A type of function

Answer: B

### What is a directed graph?

- A. A graph with loops
- B. A graph with weighted edges
- C. A graph with arrows on the edges
- D. A graph with multiple edges

Answer: C

### What is an undirected graph?

- A. A graph with loops
- B. A graph with weighted edges
- C. A graph with arrows on the edges
- D. A graph with multiple edges

Answer: D

### What is a weighted graph?

- A. A graph with loops
- B. A graph with arrows on the edges
- C. A graph with multiple edges
- D. A graph with values assigned to its edges

Answer: D

### What is a cycle in a graph?

- A. A path from one vertex to another
- B. A connected component of a graph
- C. A sequence of vertices and edges that starts and ends at the same vertex
- D. A set of vertices that are not connected by any edge

Answer: C

### What is a connected graph?

- A. A graph with no cycles
- B. A graph with all vertices connected by at least one edge
- C. A graph with multiple edges between vertices
- D. A graph with no loops

Answer: B

### What is a tree?

- A. A type of graph with no cycles

- B. A type of graph with multiple edges
- C. A type of graph with loops
- D. A type of graph with weighted edges

Answer: A

### What is a bipartite graph?

- A. A graph with no cycles
- B. A graph with weighted edges
- C. A graph with two sets of vertices such that each edge connects a vertex from one set to a vertex in the other set
- D. A graph with multiple edges between vertices

Answer: C

### What is a spanning tree?

- A. A tree that includes all vertices of a graph
- B. A tree with no cycles
- C. A tree with multiple edges between vertices
- D. A tree with weighted edges

Answer: A

### What is the minimum spanning tree of a graph?

- A. The smallest tree that includes all vertices of the graph
- B. The tree with the minimum weight among all possible spanning trees of the graph
- C. The tree with the maximum weight among all possible spanning trees of the graph
- D. A tree that includes only a subset of the vertices of the graph

Answer: B