

**Quiz 5**  
**Discrete Structures – Spring 2024**

Time: 10 Mins

Name:

Total Marks: 10

ID:

**Note:** Cutting or over-writing is not acceptable.

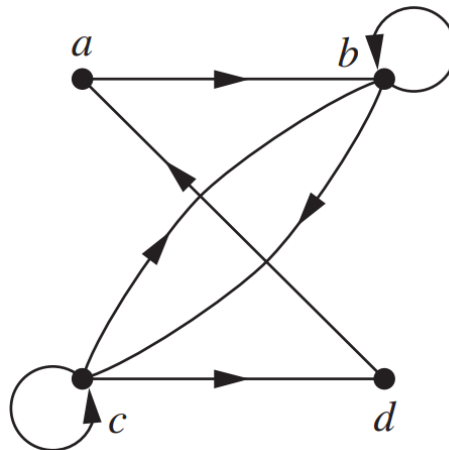
Show your working otherwise no credit will be given.

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**Question # 1**

(CLO 4 – 5 Marks)

**Analyze** the following directed graph and carefully plot the required matrix.



i) The size of the incidence matrix of this graph will be \_\_\_\_\_

a) 4 x 4

c) 4 x 7

b) 7 x 7

d) 7 x 4

ii) The size of the adjacency matrix of this graph will be \_\_\_\_\_

a) 4 x 4

c) 4 x 7

b) 7 x 7

d) 7 x 4

iii) The number of edges incident on vertex (c) are \_\_\_\_\_

a) 1

c) 3

b) 2

d) 4

iv) The number of vertices adjacent to vertex (a) are \_\_\_\_\_

a) 1

c) 3

b) 2

d) 4

v) This graph has \_\_\_\_\_ loops

a) 1

c) 3

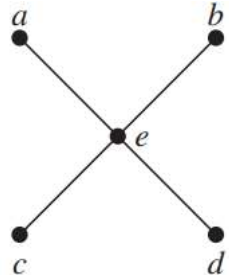
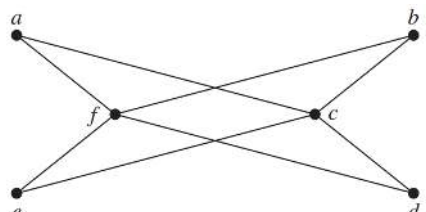
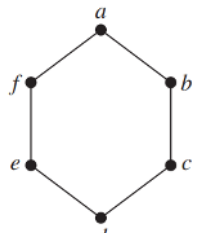
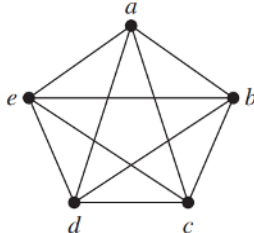
b) 2

d) 4

## Question # 2

(CLO 4 – 5 Marks)

**Analyze** the following undirected graph and answer the following question related to this graph.  
(Select more than one option, if applicable)

<p>This is _____ Graph</p> <p>a) Complete                      c) Regular</p> <p>b) <b>Bipartite</b>                      d) None</p>	
<p>This is _____ Graph</p> <p>a) Complete                      c) Regular</p> <p>b) <b>Bipartite</b>                      d) None</p>	
<p>This is _____ Graph</p> <p>a) Complete                      c) <b>Regular</b></p> <p>b) Bipartite                      d) None</p>	
<p>This is _____ Graph</p> <p>a) <b>Complete</b>                      c) <b>Regular</b></p> <p>b) Bipartite                      d) None</p>	
<p>This is _____ Graph</p> <p>a) Complete                      c) Regular</p> <p>b) Bipartite                      d) <b>None</b></p>	