ourdiu.com | Shared by Md Shahinur Rahman ( )

Daffodil International University

Faculty of Science, Information & Technology

Department of Computing and Information System

MidTerm Semester Examination, Fall-2026

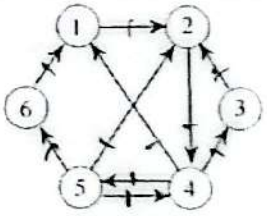
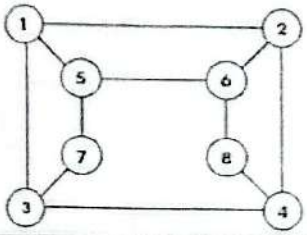
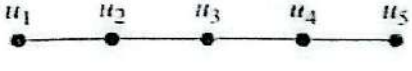
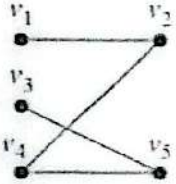
Course Code: CIS123 Course Title: Discrete Mathematics

Level: 1 Term: 3 Section: ALL

Exam Duration: 1.5 Hours **Marks: 25**

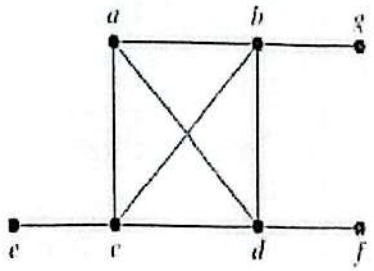
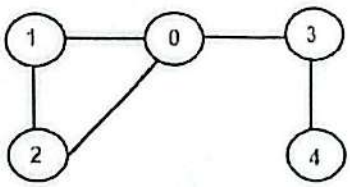
Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes.

Sl.		Question	Mark	CO
1	a	Demonstrate your knowledge to draw the graph: C_5, $K_{3,2}$, regular graph and multigraph.	4	CO2
	b	i. Find the in-degree and out-degree of the given graph in fig 02  Fig 02	2*2 = 4	
		ii. Represent the directed graph in fig. 02 using adjacency list graph representation method.		
		iii. Prove hand shaking theory using an example by yourself of pseudo graph.	2*2 = 4	
		iv. Represent your graph in ques. 1.b(iii) using adjacency matrix of graph representation method.		
2	a	Determine the graph G is bipartite or not. Justify your answer.  Graph: G	3	CO3
	b	Determine the graph H and I are isomorphic or not. Justify your answer using all steps.  Graph: H  Graph: I	5	

Organised by: Md Shahinur Rahman (Sajeeb) | CIS - 24 (A) | WP: 01762710303

ourdiu.com | Shared by Md Shahinur Rahman ( )

	c	I. Determine whether the given graph 'A' has a Hamilton circuit and path or not. (Mention rules and path if it has)  Graph: A	2.5*2 = 5	
		II. Determine whether the given graph 'B' has a Euler circuit and path or not. (Mention rules and path if it has)  Graph: B		

Allah Hafez !

ourdiu.com