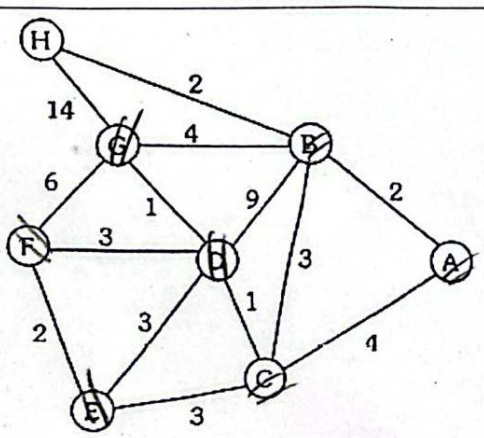
Daffodil International University

Faculty of Science & Information Technology
Department of Computing and Information System
Final Examination, Fall-2025
Course Code: CIS211, Course Title: COMPUTER NETWORKS
Level: 2 Term: 2

Exam Duration: 2 Hours **Marks: 40**

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.	a)	**Explain** Loss, Delay, and Throughput of any computer network	[Marks 5]	CO3
	b)	**Suppose** we have an IP address 192.168.16.0/24. Now create 4 subnets using following host requirements: 1st subnet= 130, 2nd subnet = 80, 3rd subnet = 60, 4th subnet = 30	[Marks 5]	
2.		A hospital's new system handles two critical data flows: **Flow A**, which requires the real-time, low-delay transmission of live patient vital signs; and **Flow B**, which involves the complete, error-free transfer of sensitive Electronic Health Records (EHRs), where reliability is mandatory.		
	a)	**Determine** the best suitable transport layer protocols for Flow A and Flow B and **Show** the header architecture of both protocols.	[Marks 6]	CO4
	b)	**Differentiate** between Go-back-n and selective repeat ARQ protocols in terms of working procedure and efficiency.	[Marks 4]	
3.	a)	 **Create** the routing table of A using Link State routing protocol.	[Marks 5]	CO4

	b)	Suppose the following data is transmitted through the transport layer using 8-bit segmentation. Now **Apply** the UDP Checksum Error Detection on the data, 153 | 226 | 36 | 132	**[Marks 5]**	
4.	*a)*	Differentiate between Ad-Hoc and Infrastructure communication mode of Wireless Communication System.	**[Marks 5]**	**CO5**
	b)	What could be the possible application of IEEE 802.11? Apply your understanding of wireless communication to briefly explain the architecture of IEEE 802.11, including key components.	**[Marks 5]**	