2109240073A

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, NOVEMBER - 2024

FUNDAMENTALS OF NETWORK ADMINISTRATION

[Maximum marks: 75]   [Time: 3 Hours]

PART A

I. Answer all the following questions in one word or one sentence. Each question carries 1 mark.

(9 x 1 = 9 Marks)

		Module outcome	Cognitive level
1	List any two basic elements of a computer network.	M1.01	R
2	Name any two guided transmission media.	M1.02	R
3	List any two Random Access Techniques in medium access control.	M2.01	R
4	What is the speed of Fast Ethernet?	M2.02	R
5	List any two classifications of routing algorithms.	M3.02	R
6	Name any two Routing Algorithm Metrics.	M3.03	R
7	List the two Link-State Routing Protocols.	M3.05	R
8	Name the two transport layer protocols.	M4.02	R
9	Expand DHCP.	M4.07	R

PART B

II. Answer any eight questions from the following. Each question carries 3 marks.

(8 x 3 = 24 Marks)

		Module outcome	Cognitive level
1	Compare LAN and WAN.	M1.03	U
2	Explain Datagram Packet Switching.	M1.04	U
3	Compare ARP and RARP.	M2.03	U
4	Write short notes on IPv4 Address Classes.	M2.05	R
5	Explain Static vs Dynamic Routing Algorithms.	M3.02	U
6	Draw the architecture of the Internet.	M3.04	R
7	Sketch Routing Protocols Classification block diagram.	M3.05	R
8	List any three applications that uses UDP.	M4.02	R
9	Name any three Application Layer Protocols.	M4.03	R
10	Explain Transmission Control Protocol (TCP).	M4.02	U

PART C
Answer all questions. Each question carries seven marks.

(6 x 7 = 42 Marks)

		Module outcome	Cognitive level
III	Illustrate OSI model and explain the functionalities of each layer.	M1.05	U
	OR		
IV	Compare OSI model and TCP/IP model.	M1.05, 06	U
V	Illustrate TCP/IP model and explain the functionalities of each layer.	M1.06	U
	OR		
VI	Explain Switch and Router.	M1.07	U
VII	Illustrate IPv4 Addressing Types.	M2.06	U
	OR		
VIII	Explain subnet mask with example.	M2.11	U
IX	Explain IPv4 Reserved Address.	M2.07	U
	OR		
X	Summarize Packet Flow in IPv4 Network.	M2.08	U
XI	Summarize Routing Information Protocol.	M3.06	U
	OR		
XII	Explain OSPF Basic Operation steps.	M3.07	U
XIII	Summarize the four Pillars of Network Security.	M4.08	U
	OR		
XIV	Explain Hypertext Transfer Protocol.	M4.03	U

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