

[Time:2.30 Hrs]		[Marks:75]
Please check whether you have got the right question paper.		
N.B:	1. All question are compulsory. 2. Figures to the right indicate full marks. 3. Students answering in the regional language should refer in case of doubt to the main text of the paper in English.	

Q.1	Attempt <u>any three</u> of the following: a. What are the advantages of multipoint connection over point-to-point one? b. Identify and explain five components of data communication system. c. State the principles for protocol layering. d. Define scrambling and give its purpose. e. Define carrier signal and explain its role in analog transmission. f. List and Explain the functions of Data Link Layer.	15 5 5 5 5 5 5
Q.2	Attempt <u>any three</u> of the following: a. Write a short note on Wave Length Division Multiplexing. b. What is the function of the twisting in twisted-pair cable? c. Discuss the terms efficiency and delay in switching techniques. d. Explain checksum mechanism with an example. e. Define Hamming Distance. Find Hamming Distance for: a) d(000,011) b) d(000,101) c) d(011,110) f. What is Spread Spectrum? Explain Frequency Hopping Spread Spectrum.	15 5 5 5 5 5 5 5
Q.3	Attempt <u>any three</u> of the following: a. Write short note on Bluetooth. b. With a help of a diagram explain the configuration required for fast Ethernet and Gigabit Ethernet. c. Explain the different types of Satellite Networks. d. How does reservation solve the problem occurring in Carrier Sense Multiple Access/Collision avoidance ? e. With the help of an example explain the concept of Polling. f. Explain in detail High-Level Data Link Control protocol.	15 5 5 5 5 5 5 5
Q.4	Attempt <u>any three</u> of the following: a. Write a note on Internet Control Message Protocol version 4. b. Draw the structure of Internet Protocol Version 4 Header and explain its various fields. c. Explain Network layer services.	15 5 5 5 5

	d. Write a short note on Packet Switching.	5
	e. With the help of an example explain Routing Information Protocol.	5
	f. Discuss the various Open Loop Congestion Control Methods.	
Q.5	Attempt <u>any three</u> of the following:	15
	a. List and Explain the various functions of Application Layer.	5
	b. Explain TCP as a connection oriented and reliable protocol.	5
	c. With a help of diagram explain Dynamic Host Configuration Protocol.	5
	d. Write a note on Secured Shell.	5
	e. Explain Simple Mail Transfer Protocol(SMTP).	5
	f. List and explain the types of File Transfer Protocol Commands.	5