

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	i. Explain in detail about network dependent and network independent layers of OSI reference model.	10	K2	CO1
	ii. List out the various approaches of switching?	3	K2	
(OR)				
b)	i. Analyze the advantages of optical fiber over twisted pair and coaxial cable.	6	K4	CO1
	ii. Explain the major component of a packet switch and their functions.	7	K3	
12. a)	i. State the physical properties of Ethernet 802.3 with necessary diagram of Ethernet transceiver and adaptor.	6	K4	CO2
	ii. Assess and explain the Ethernet frame format.	7		
(OR)				
b)	i. Elaborate process of Cyclic Redundancy Check, and illustrate with an example.	7	K3	CO2
	ii. Depict the function of CRC division using polynomials with an example.	6	K3	
13. a)	i. Analyze the Link State algorithm in detail.	5	K3	CO3
	ii. Consider the network shown in Fig 1. Compute the shortest path from C to all other nodes using Link-State algorithm. Also, update the forwarding table of node C.	8		

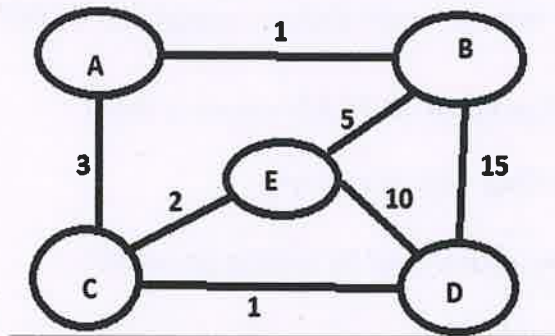


Fig. 1

(OR)

b)	Explicate the functioning of the Border Gateway Protocol, which is used for Inter domain routing in internetwork.	13	K3	CO3
14. a)	i. Compare the performance, working principles of and TCP. Provide the application of these 2 protocols.	7	K4	CO4
	ii. Provide the header format of TCP and UDP with a neat diagram.	6		

(OR)

	b)	i.	Illustrate the establishment of a Three Way Handshake protocol, while the connection is established between Alice and Bob.	7	K4	CO4
		ii.	Mention the reason for the occurrence of congestion in a network. Provide various solutions to overcome congestion.	6		
15.	a)	i.	Explicate the functions of IMAP and MIME. How does MIME enhance SMTP? Mention the purpose of using IMAP protocol.	8	K3	CO2
		ii.	Discuss various functions performed by DNS. With example.	5		
			(OR)			
	b)	i.	Tabulate the various HTTP request operations and the responses.	7	K3	CO5
		ii.	Compare the function of IMAP from POP3. Why one might be chosen over the other? Mention few applications of IMAP. Whether IMAP is more secure? Justify your reason.	6		

PART – C

(1 x 15 = 15Marks)

Q.No.	Questions	Marks	KL	CO		
a)	i. Classify types of parity check. Original data transmitted : <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="padding: 2px;">11001100</td><td style="padding: 2px;">10101010</td></tr></table> Illustrate the 2 dimensional parity check for the given data.(EVEN PARITY IS PREFERED)	11001100	10101010	5	K3	CO1
11001100	10101010					
	ii. How does the guided media differ from unguided media classify three methods used for data communication using guided media and two methods used for data communication using unguided media. (OR) For the given IP addresses. Categorize according the various classes. Devise a method and criticize on that.	10	K6			
	i. 227.12.14.87	3		K5 CO3		
	ii. 193.14.56.22	3				
	iii. 14.23.120.8	3				
	iv. 252.5.15.111	3				
	v. 134.11.78.56	3				