Register Number:……..

KUMARAGURU college of technology
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B.E DEGREE EXAMINATIONS: APRIL /MAY 2024

(Regulation 2018)

Sixth Semester

ELECTRONICS AND COMMUNICATION ENGINEERING

U18ECE0022**:** High Speed Networks

COURSE OUTCOMES

CO1: Explain the concepts of ATM and high-speed LAN.

CO2: Analyze congestion and traffic managements concepts.

CO3: Discuss quality of services in IP networks.

CO4: Compare different IP forwarding architectures and integrated/differentiated services.

CO5: Summarize Bluetooth module protocol stacks.

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	How network overhead is reduced in Frame relay networks?	CO1	[K_2]
2.	What is the role of AAL in ATM?	CO1	[K_2]
3.	Recall the need for flow control and error control.	CO2	[K_2]
4.	Why queuing analysis is needed?	CO2	[K_2]
5.	Define Elastic Traffic.	CO3	[K_1]
6.	List the various categories of services in ISA.	CO3	[K_1]
7.	Recall Soft state in RSVP.	CO4	[K_1]
8.	Draw the label format of MPLS.	CO4	[K_1]
9.	What is the role of Link Manager Layer?	CO5	[K_2]
10.	List the various groups used in the bluetooth protocol stack.	CO5	[K_1]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	Build and analyze a network WAN structure that provides clocking and switching services in a network with a high-speed interconnecting components.	10	CO1	[K_4]

	b)	Examine and Interpret the protocol architecture of fixed size cells in which Multiple logical connections can be multiplexed over a single path.	6	CO1	[K_4]
12.	a)	Congestion control is difficult for frame relay network. End user can control the congestion by limiting the flow of traffic. Justify the statement with suitable control techniques.	10	CO2	[K_4]
	b)	The M/M/1 queue has arrivals at a rate of 2 per minute and server service at a rate of 4 per minute. How many data are found in the system on average? How many data rates are found on average to get serviced?	6	CO2	[K_2]
13.	a)	Illustrate the components, services and approaches of Integrated services.	10	CO3	[K_2]
	b)	Explain the bit round fair queuing and compare it with FIFO queuing.	6	CO3	[K_2]
14.	a)	Identify a IP packet routing technique that uses labels instead of complex routing tables to increase the delivery rate of IP packets.	10	CO4	[K_3]
	b)	Explain how RSVP is designed to reserve resources across a network using the integrated services model.	6	CO4	[K_2]
15.		Discuss the architecture of Bluetooth and explain the various group of its protocol stack.	16	CO5	[K2]
16.	a)	Illustrate the IEEE 802.11 architecture of WLAN and its services.	10	CO1	[K_2]
	b)	Compare the high speed LANs with various parameters.	6	CO1	[K_2]

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