KUMARAGURU
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B.E DEGREE EXAMINATIONS: APRIL / MAY 2023

(Regulation 2018)

Sixth Semester

ELECTRONICS AND COMMUNICATION ENGINEERING

U18ECE0022**:** High Speed Networks

COURSE OUTCOMES

CO1: Explain the concepts of ATM and high speed LAN (K2).

CO2: Analyze congestion and traffic managements concepts (K4).

CO3: Discuss quality of services in IP networks (K2).

CO4: Summarize interworking of different protocols with ATM (K2).

CO5: Compare different IP forwarding architectures and integrated/differentiated services (K4).

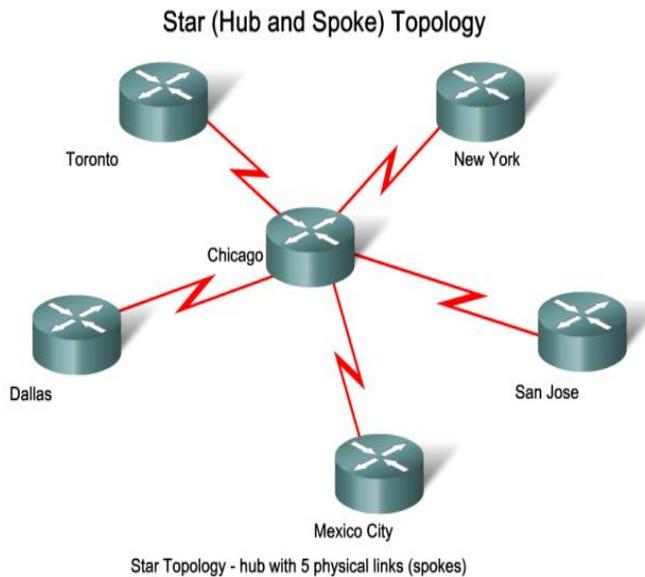**CO6:** Summarize Bluetooth module protocol stacks (K2).

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

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

1.	Why frame relay is widely used in WAN technology?	CO1	[K_1]
2.	Differentiate fast and gigabit ethernet.	CO1	[K_2]
3.	Write the little's equation for single server queue.	CO2	[K_1]
4.	Differentiate open loop and closed loop congestion control.	CO2	[K_1]
5.	Define Elastic and Inelastic traffic.	CO3	[K_1]
6.	Compare integrated services with differentiated services.	CO3	[K_2]
7.	List the characteristics of RSVP.	CO4	[K_1]
8.	What are labeled switch routers?	CO4	[K_1]
9.	Define the architecture of Scatternet.	CO5	[K_1]
10.	Recall the services of SDP.	CO5	[K_1]

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

11.	a)	Analyze the below figure and discuss with a suitable WAN protocol with its illustrations	8	CO1	[K4]

Star (Hub and Spoke) Topology

Star Topology - hub with 5 physical links (spokes)

	b)	Explain the architecture of IEEE 802.11	8	CO1	[K2]
12.		Congestion is handled in frame relay based networks and packet switched networks in a effective manner. Analyze the statement with suitable mechanisms	16	CO2	[K4]
13.	a)	Explain the various queuing discipline with suitable examples	8	CO3	[K2]
	b)	How Random Early Detection algorithm is useful in IP networks?	8	CO3	[K2]
14.		Build a network that supports Label switched routers for switching and routing packets based on label appended to packet. Also explain the operation with suitable illustrations.	16	CO4	[K3]
15.	a)	Illustrate the services and components of ISA	8	CO5	[K2]
	b)	Elaborate how the DS architecture is designed to provide simple range of network services	8	CO5	[K2]
16.	a)	Explain the bluetooth protocol stack with suitable illustrations	8	CO6	[K2]
	b)	Discuss the role of host controller and link manager in bluetooth.	8	CO6	[K2]

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