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**Question Paper Code: 59407**

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

Elective

Electronics and Communication Engineering

15UEC907– HIGH SPEED NETWORKS

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5x 1 = 5 Marks)

1. Which one of the following event is not possible in Wireless LAN. CO1- R  
(a) Collision detection (b) Acknowledgement of data frames  
(c) Multi-mode data transmission (d) None of the mentioned
  
2. If Arrival rate ( $\lambda$ ) < Service Rate ( $\mu$ ) then, CO2- R  
(a) Queue is empty (b) Saturated (c) Under Saturated (d) Congested
  
3. The maximum burst size that can be sent at the peak rate is called CO3- R  
(a) Burst Tolerance (b) Sustained Cell Rate  
(c) Constant Bit Rate (d) Minimum Cell Rate
  
4. In BRFQ (Bit Round Fair Queuing) , a queue is serviced by CO4- R  
(a) Bit-by-bit round robin (b) Priority based  
(c) Random bit (d) None of the above
  
5. A RSVP session is identified by a CO5- R  
(a) destination address (b) an optional destination port  
(c) protocol (d) all of the above

PART – B (5 x 3= 15 Marks)

6. List the responsibilities of the ATM sublayers with the help of a diagram. CO1-U
7. Differentiate between implicit congestion signaling and explicit congestion signaling. CO2- Ana
8. Why the congestion control in TCP/IP-based internet is complex? CO3- R
9. How Random early detection helps in congestion avoidance? CO4- R
10. What is the need for RTCP? CO5- R

PART – C (5 x 16= 80Marks)

11. (a) Explain the following in the context of ATM: CO1- U (16)
  - (a) LAN emulation over ATM
  - (b) IP over ATM

Or

  - (b) Compare fast Ethernet and Gigabit Ethernet. Mention few applications of wireless LANS. CO1- U (16)
12. (a) Explain any two Queuing models and analyze the same using little's theorem. CO2- U (16)

Or

  - (b) (i) Discuss in detail about traffic rate management and discuss on explicit congestion avoidance technique in detail. CO2- U (12)
  - (ii) List the objective of Frame Relay congestion control CO2- U (4)
13. (a) Explain in detail about TCP flow control and congestion control. CO3- U (16)

Or

  - (b) (i) What are the requirements for ATM traffic and congestion Control? CO3- U (8)
  - (ii) Describe the traffic management framework. CO3- U (8)
14. (a) (i) Draw the Integrated Services Architecture and explain it in detail. CO4- U (10)
- (ii) Discuss the advantages and downsides of Integrated Services architecture. CO4- U (6)

Or

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|-----|-----|--|--------|-----|
|     | (b) | (i) Explain the fair queuing in detail.  | CO4- U | (8) |
|     |     | (ii) Explain the benefits of Random Early Detection algorithm.                                   | CO4- U | (8) |
| 15. | (a) | (i) List and explain the three RSVP reservation styles in detail.                                | CO5- U | (8) |
|     |     | (ii) Explain the MPLS operation in detail with a diagram.  | CO5- U | (8) |
|     |     | Or   |        |     |
|     | (b) | (i) Explain the architecture of RTP data transfer protocol in detail.                            | CO5-U  | (8) |
|     |     | (ii) Explain the functions performed by the RTP control protocol and its packet types in detail. | CO5-U  | (8) |

