Reg. No. :

Question Paper Code: 49222

M.E. DEGREE EXAMINATION, MAY 2015.

Elective

Communication Systems

14PCM504 – HIGH PERFORMANCE COMMUNICATION NETWORKS

(Regulation 2014)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions.

PART A - (5 x 1 = 5 Marks)

1. _____ network maintains state information for its on going connections.
   (a) Virtual Circuit   (b) Datagram
   (c) Packet Switched   (d) Circuit switched

2. _____ protocol provides reservations for bandwidth in multicast trees.
   (a) RSVP   (b) RTSP   (c) RTP   (d) RTCP

3. _____ creates virtual topology on the top of physical topology of the public network.
   (a) MPCS   (b) Overlay networks
   (c) Remote access VPN   (d) Site –to-Site VPN

4. At the supermarket a checkout operator has on average 4 customers and customers arrive every 2 minutes. How long must each customer wait in line on average?
   (a) 6 minutes   (b) 8 minutes   (c) 10 minutes   (d) 12 minutes

5. _____ is language used to define the management information residing in a managed network   entities.
   (a) MIB   (b) SNMB   (c) MPLS   (d) SMI

PART - B (5 x 3 = 15 Marks)

6. What are the main features of ATM?

7. Enlist the features of Reservation Protocol (RSVP).

8. What is meant by RED policy?

9. Define the term Kerberos. How does it offer authentication service over a network?

10. What is NTA and mention the role of NTA in firewall?

PART - C (5 x 16 = 80 Marks)

11. (a) (i) Give a detailed description about OSI model and compare with TCP/IP model. (8)

    (ii) Explain multiplexing in SONET with suitable diagram. (8)

Or

    (b) (i) Explain the protocols of BISDN? (8)

    (ii) Explain the Quality of services parameters of ATM. (8)

12. (a) Discuss the schemes that are used to preserve acceptable audio quality in the presence of packet loss. (16)

Or

    (b) (i) What is the use of leaky bucket policing algorithm ?and explain the algorithm with suitable examples. (10)

    (ii) Discuss about the differentiated services. (6)

13. (a) (i) What is VPN ?Explain site –to-site VPN. (8)

    (ii) Discuss how traffic engineering facilitate to design a efficient network. (8)

Or

    (b) (i) Explain the MPLS architecture with routing process based VPN. (12)

    (ii) What is overlay networks? Mention its significance. (4)

14. (a) (i) Discuss in detail about need for modeling. (8)

    (ii) What are the parameters considered for the Network performance evaluation? (8)

Or

    (b) (i) Explain in detail about the Poisson model with an example in networking environment. (8)

    (ii) Explain in detail about non-Poisson modeling. (8)

15. (a) (i) Explain any one of the key distribution and certification in network security. (8)

    (ii) Explain about data types and encoding used in ASN.1. (8)

Or

    (b) What is meant by authentication? Explain about merits and demerits of different authentication protocols. (16)

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