Register Number: ……

M.E. DEGREE EXAMINATIONS: NOV/DEC 2010

Third Semester

COMPUTER SCIENCE AND ENGINEERING

CSE556: High Speed Networks

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

Answer ALL Questions:-

PART A (10 x 2 = 20 Marks)

1. What is the data rate supported in Gigabit Ethernet?
2. Name any two applications demanding high speed LANs.
3. State the principles of ISDN.
4. What is the use of I.400 series?
5. Give the list of traffic types supported in ATM.
6. What kinds of service are offered in ATM adaptation layer?
7. What is meant by elastic service?
8. Mention the key characteristics of differentiated services.
9. What is jitter? Give the formula for calculating average jitter.
10. State the design issues of resource reservation protocol.

PART B (5x16 = 80 Marks)

11. a) Describe about Gigabit Ethernet with a neat sketch. Give a comparison of Fast Ethernet with Gigabit Ethernet. **(OR)**
    b) Discuss in detail about SONET architecture with a neat block diagram.

12. a) Give a detailed description on ISDN architecture and channel structures. **(OR)**
    Explain the ITU-T defined data link control protocol for D channel. Discuss about the frame structure and operations with neat diagrams.

13. a) (i) Discuss about virtual channel connections and explain how call establishment takes place in ATM? (8)
    (ii) Describe the ATM cell structure with a neat block diagram. (8)
    (OR)
    b) (i) Explain in detail about AAL protocols and its type with appropriate bloack diagrams.

14. a) Explain the different queuing discipline used at routers to forward and process the packets over the path leading to destination. **(OR)**
    b) Describe how random early detection (RED) provides congestion control and compare its performance with drop tail policy.

15. a) (i) Write a brief note on operations supported in resource reservation protocol. (10)
    (ii) Give the format of MPLS label and explain its elements. (6)
    (OR)
    b) Explain the RTP protocol architecture with the help of a neat diagram.

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