

B.TECH SEM - VIII (2007 COURSE) (E & TC ENGG.) :
WINTER - 2017

SUBJECT : COMPUTER & COMMUNICATION NETWORKS

Day : **Thursday** Time : **02.30 PM TO 05.30 PM**
Date : **23/11/2017** **W-2017-2718** Max. Marks : 80

N.B.:

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.** Out of the remaining attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in **SEPARATE** answer books.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.
- 4) Figures to the right indicate **FULL** marks.
- 5) Assume suitable data if necessary.

SECTION – I

- Q.1** a) Differentiate between peer to peer network and client server network. [05]
b) What are the shortcomings of circuit switching are overcome by packet switching? [05]
c) Describe virtual networks and tunnels. [04]
- Q.2** a) Explain the end to end delivery by network layer. [07]
b) Explain TCP/IP protocol architecture and write down advantages to layering as seen in the TCP/IP architecture. [06]
- Q.3** a) Discuss line coding techniques in detail. [07]
b) What are the four SONET layers? Discuss the functions of each SONET layer. [06]
- Q.4** a) What are the types of ARQ error control? How do they differ from one another? [07]
b) Write a note on “Satellite Cellular Network”. [06]

SECTION – II

- Q.5** a) Explain bridge in networking. [05]
b) Explain quality of service. [05]
c) Explain the working of RSVP. [04]
- Q.6** a) Explain in detail the functioning of slotted ALOHA protocol. [07]
b) Explain CSMA/CD in detail. [06]
- Q.7** a) What do you mean by congestion? How it affects the network performance? [07]
b) Describe the shortest path algorithm for routing data. [06]
- Q.8** a) Write a short note: [08]
i) ATM cell format
ii) Frame Relay
b) Explain multi-protocol label switching (MPLS). [05]