

**B.TECH SEM – IV (2007 COURSE) (INF. TECH.) : WINTER
- 2017**

SUBJECT: COMPUTER COMMUNICATION AND NETWORKS

Day : **Tuesday** Time **02.30 PM TO 05.30 PM**
Date : **21/11/2017** **W-2017-2421** Max.Marks.80

N.B.

- 1) **Q.1 and Q.5** is COMPULSORY. Out of remaining questions attempt any **TWO** questions from each section.
- 2) Answer to both the section should be written in the **SEAPRATE** answer books.
- 3) Figures to the right indicate **FULL** marks.
- 4) Assume suitable data if necessary.

SECTION-I

- Q.1** a) Which signal has a wider bandwidth, a sine wave a frequency of 200Hz or a sine wave with a frequency of 300Hz? **(05)**
- b) Which of the four digital to analog conservation techniques (ASK, PSK, FSK or QMA) in the most susceptible to noise? **(05)**
- c) What kind of errors is undeletable by the checksum? **(04)**
- Q.2** a) Explain limits of achievable data rate in digital communication. **(07)**
- b) Explain frequency and phase modulation principles. **(06)**
- Q.3** a) List and explain digital continuous wave modulation techniques for modern in detail. **(07)**
- b) Construe the hamming code for the bit sequence 10011010. **(06)**
- Q.4** a) Explain pulse code modulation with the help of block diagram. **(07)**
- b) Explain following terms. **(06)**
i) LRC ii) VRC

SECTION-II

- Q.5** a) Compare LAN, MAN and WAN **(07)**
- b) What are the LAN topologies? Explain. **(07)**
- Q.6** a) Explain transmission media with fiber optics communication. **(07)**
- b) Explain basic principles of satellite communication. **(06)**
- Q.7** a) List two ways in which the OSI reference model and TCP/ IP reference model are the same and also list two ways in which they differ. **(07)**
- b) Explain MAC frame formal. **(06)**
- Q.8** a) What are the difference between TCP and UDP? **(07)**
- b) Why gateway is called “protocol converter”. **(06)**