



VI Semester B.Sc. Examination, May/June 2015
(Semester Scheme)
Computer Science (Paper – 8)
Basics of Communication, Network and Internet

Time : 3 Hours

Max. Marks : 80

Instruction : Answer all the questions.

1. a1) What is a data communication ? Explain the fundamental characteristics of data communication. 5
 - a2) Explain point to point and multipoint line configuration of networks. 7
- OR**
- anb1) Explain the classification of computer networks. 6
 - b2) Explain different data transmission modes. 6
2. a1) What is the significance of twisting in twisted-pair-cable ? Explain. 6
 - a2) Explain different types of Antenna. 6
- OR**
- b1) Explain radio waves with their advantages and disadvantages. 6
 - b2) Explain three categories of satellites, based on location of the orbit. 6
3. a1) Explain the concept of Redundancy in error detection and error correction method with suitable example for each. 12
- OR**
- b1) What is a multiplexing ? Explain TDM with example. 7
 - b2) What is the purpose of cladding in an optical fiber ? Explain. 5



4. a1) Define following terms :

6

i) Periodic signal

(Sawtooth Oscilloscope (PSO - 8))

ii) Wave length

(Wavelength of Communication (Wavelength))

iii) Phase

iv) Bit rate

v) Peak amplitude

vi) Bandwidth.

a2) Explain low-pass and band-pass channel.

6

OR

b1) Why we need analog-to-analog conversion ? Explain any two modulations with a neat diagram.

7

b2) Explain PAM process in digitalization.

5

5. a1) Write a note on transmission impairment.

6

a2) Explain any three line coding schemes.

6

OR

b1) What are the mechanisms for modulating digital data into an analog signal ? Explain in detail.

9

b2) Explain frequency reuse principle in cellular telephony.

3

6. a1) What are the functions of a bridge ? Explain working principle of any two bridges in detail.

8

a2) Explain the functions of presentation layer in OSI model.

4

OR



b1) Write a note on following :

12

- a) Router
- b) FTP
- c) ARP
- d) RARP
- e) IGMP
- f) ICMP.

7. Answer any four of the following :

(4×2=8)

- a) What is an IP address ?
- b) List the advantages of star topology.
- c) What is a Quantization ?
- d) How do guided media differ from unguided media ?
- e) What is a repeater ?
- f) What is an address mapping ?