20621

VI Semester B.Sc. Examination, November/December 2013
(Scheme Semester)
Paper – 8 : Computer Science
Basics of Communication, Networks and Internet

Time : 3 Hours
Max. Marks : 80

Instruction : Answer **all** the questions.

1. a1) What is data communication ? Explain the five components in data communication. **6**

   a2) Explain different forms of data representation. **6**

   OR

   b1) Explain different data transmission modes with examples. **6**

   b2) Discuss any three Network Topologies with their advantages and disadvantages. **6**

2. a1) Explain different types of antenna used in microwave communication. **6**

   a2) Explain frequency reuse principle in Cellular Telephony. **6**

   OR

   b1) Explain different categories of satellites. **6**

   b2) Explain Co-axial cable with their advantages and disadvantages. **6**

3. a1) Define the following terms :
   - a) Wavelength
   - b) Frequency
   - c) Composite signal
   - d) Bandwidth
   - e) Bit rate
   - f) Phase
   6

   a2) Explain any one of error detection method with an example. **6**

   OR

   b1) Explain different transmission Impairment. **6**

   b2) Explain Amplitude Modulation with a neat diagram. **6**

P.T.O.

4. a1) With a neat diagram explain Pulse Code Modulation. **12**

OR

   b1) Explain ASK and PSK with neat diagram. **8**

   b2) Write a note on carrier signal. **4**

5. a1) What is Multiplexing ? Explain frequency division multiplexing with a neat diagram. **8**

   a2) Compare logical address with physical address. **4**

OR

   b1) Explain the importance of RARP, RAP and ICMP protocols. **12**

6. a1) Write the functions of Bridges and explain simple and learning bridge. **8**

   a2) Write a note on gateway. **4**

OR

   b1) Explain UDP, HTTP and FTP. **12**

7. Answer **any four** questions : **(4×2=8)**

   a) What is a protocol ?

   b) What is point -to-point connection ?

   c) Mention 7 layers of OSI Model.

   d) What is a Router ?

   e) What is Hamming distance ?

   f) What is a cross-talk ?