Registration No. : | | | | | | | | | | |

Total number of printed pages – 2

B. Tech

PEEC 4304 (New)

Sixth Semester (Back) Examination – 2013

COMPUTER NETWORK AND DATA COMMUNICATION

BRANCH : AEIE, EC, ETC

QUESTION CODE : B239

Full Marks – 70

Time : 3 Hours

*Answer Question No. **1** which is compulsory and any **five** from the rest.*
The figures in the right-hand margin indicate marks.

1. Answer the following questions : 2×10

   (a) What is the difference between broadcast and multicast ?

   (b) Explain the meaning of peer to peer process.

   (c) Calculate baud rate for a 64 kbps, 64 QAM signal.

   (d) What is the difference between information frame and supervisory frame in HDLC protocol ?

   (e) Distinguish between baud rate and bit rate.

   (f) Perform bit stuffing for the following sequence :

   1101 1111 1101 1111 10101

   (g) Write the different types of services associated with a packet in IPV4.

   (h) Define Nyquist signaling rate.

   (i) How does a LAN differ from WAN ?

   (j) What is the difference between simplex and half duplex transmission mode ?

2. (a) Draw the signal for Manchester and differential Manchester encoding given the bit sequence '1101010010'.Write the advantages of each of them. 5

   (b) What is the drawback of PSK versus FSK modulation ? 5

P.T.O.

3. (a) How do the layers of TCP\IP protocol correlate to layers of OSI model ? 5

(b) Differentiate between token ring and token passing. 5

4. (a) With the help of frame sequence diagram explain how following frames are handled in Go back N ARQ protocol : 5

(i) A corrupted I frame

(ii) A corrupted ACK frame

(b) Compare performance of Go back N ARQ and selective reject ARQ. 5

5. (a) Explain the operation of CSMA\CD protocol and find its throughput. 5

(b) How does frame relay differs from ATM ? 5

6. (a) Differentiate between circuit switching and packet switching. 5

(b) Explain how space division switch differs from time division switch. 5

7. (a) Describe the structure of IP datagram and explain the function of each field in context of IP Protocol. 5

b) Explain various function associated with the protocol ICMP. 5

8. Write short notes on any **two** : 5×2

(a) Layers of Bluetooth

(b) ARP(Address Resolution Protocol)

(c) TDM(Time Division Multiplexing).