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

Total number of printed pages – 2

B. Tech

PCCS 4302

Fifth Semester Back Examination – 2014

DATA COMMUNICATION AND COMPUTER NETWORK

BRANCH (S) : CSE, IT

QUESTION CODE : L 229

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) Define a Network.

   (b) What are the limitations of star topology ?

   (c) What is Latency in a network ?

   (d) What is a domain name ?

   (e) List three techniques used for digital-to-digital data conversion.

   (f) What is polar encoding ?

   (g) What is Frequency Modulation ?

   (h) What is Parallel transmission ?

   (i) Define Direct sequence spread spectrum.

   (j) What is Hamming distance ?

2. (a) Write some advantages and disadvantages of the following : 5

   (i) Optical Fibers

   (ii) Radio waves.

   (b) What is the role of switch in a computer network ? 5

3. (a) Distinguish between a low-pass channel and band-pass channel. 5

   (b) Using High Density Bipolar-3, encode the bit stream 10000000000100. Assume that the number of 1s so far is odd and the first 1 is positive. 5

P.T.O.

4. (a) Draw OSI reference model and explain any two layer. 5

(b) Explain various class of IP- addressing. 5

5. (a) Distinguish between synchronous and statistical TDM. 5

(b) Fid the checksum of sender and receiver site for a text of 8 characters (**"couriers"**). *[Hint : use ASCII to change each byte to a 2-digit hexadecimal number]* 5

6. (a) Briefly describe the services provided by the data link layer. 5

(b) Define piggybacking and its usefulness. 5

7. (a) What is Multiple Accesses Protocol ? Explain any one category of MAP. 5

(b) State and explain features of IEEE 802.11. 5

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

(a) Quadrature Phase Shift Keying (QPSK)

(b) TCP service for transport layer

(c) Client Server Model

(d) Token bucket.