Roll No _____ **Examination May-2014** Total no of page-2

B. Tech. (ID No. D11-804)
Computer Networks (CS-303)
Paper ID- A0465

Time: 3 hrs Max. Marks: 60

Note: Section A is compulsory. Attempt any **four** questions from Section B and **two** questions from Section C.

Section A **10X2 =20**

1. (a) What do you mean a network? Describe briefly.
   (b) What are the main characteristics of optical fiber cable?
   (c) Why the network protocols are needed?
   (d) What is the difference between FDM and TDM?
   (e) What services are provided by the transport layer to the network layer?
   (f) What is the function of RS-232 serial interface?
   (g) A signal has 8 data levels with pulse duration of 1 ms. Calculate its pulse rate and bit rate.
   (h) Describe briefly the merits and demerits of the microwave transmission.
   (i) What is code efficiency? Describe briefly.
   (j) What is meant by the Hamming code?

4X5=20

Section B

2. What is transmission media? What are the common types of the transmission media used for the communication?
3. What is ISDN? Describe in brief the working of ISDN to provide various services.
4. What are the types of the topologies used in the computer networks? Explain each one in brief
5. What is meant by congestion in network? Explain the algorithm for congestion avoidance.
6. What is framing? Why it is necessary? Explain different framing techniques used in the data link layer.

2X10=20

Section C

7. What are the wireless networks? Explain in detail various types of protocols used in their working.
8. Explain in detail various data encryption standards (DES) and their working.
9. a) Explain the different states of CSMA/CD protocol.
   b) List various differences between TCP/IP reference model and OSI reference model.

End