BCA-501

B.C.A. (Semester V) Examination – 2011
Paper: First
Introduction to Networks

Time: Three Hours]   *[Maximum Marks:* 75

Note: Section A is compulsory. Attempt any seven questions from Section B and one question from Section C.

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Section-A   **1 each**

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1. ***Fill in the blanks:***

    (a)   _____topology requires a multipoint connection.

    (b)   In _____transmission, the channel capacity is shared by both communicating devices at all times.

    (c)   The _____layer is the layer closest to the transmission medium.

    (d)   Dialog control is a function of the _____ layer.

    (e)   Transmission media is usually categorized as_____.

2.   (a)   Define Bit Rate, Baud Rate, and carrier signal. **(3)**

      (b)   (i)   Find the minimum bandwidth for an FSK signal transmitting at 2000bps. Transmission is in half duplex mode and the carriers must be separated by 3000Hz.

                                                  (3)

               (ii)   An analog signal carries four bits in each signal element. If 1000 signal element are sent per second, find the baud rate & bit rate.

      (c)   Explain the functions of the following connecting device: **(2)**

               (i)   Repeater   (ii)   Router

Section- B   6 each

3.   Explain the functions of session layer.

4.   Describe the protocol Hierarchies, used in reference model.

5.   Among WDM, FDM and TDM, which one is better & how, explain it.

6.   What is framing. Explain all the fields which are used to construct a frame.

7. Differentiate between Wireless networking and Inter networks.

8. What are the various aspects of network security?

9. Write a short note on Electronic Mail.

10. Prove that TCP & UDP follows connection. Oriented and connectionless services respectively.

11. What is Automatic Repeat Request? Explain selective Reject ARQ.

12. Write short note on HTTP and SMTP.

Section –C   15 each

13. How will you maintain privacy of data frames by using conventional methods?

14. Explain the functions of Data Link Layer.