5ᵗʰ Semester,

Examination–2013-14

BCA-11 (Bachelor of Computer Applications)

BCA-14

Data Communication and Computer Networks

Time : 3 Hours   **Maximum Marks :** 60

Note : The question paper is divided into three sections A, B and C. Give the answer according to the directions given in each section.

Section-A

(Long Answer Type Questions)

Note : Answer any two questions. Each question carries 15 Marks.

(2×15=30)

1. Explain OSI reference model in detail.

2. What is computer network ? Explain the types of network with the help of an example.

3. Explain the various types of network topology.

4. Explain the various types of communication modes.

Section-B

(Short Answer Type Questions)

Note : Answer any four questions. Each question carries 5 Marks.

$$(4 \times 5 = 20)$$

1. Differentiate between guided and unguided media.

2. What is firewall ? Explain.

3. What is NIC ? Explain the function of NIC.

4. What are the main functions of netowrk layer in OSI model? $\neq$

5. What are the advantages of Frame Relay ?

6. Explain the basic components of data communication.

7. Write short notes on various transmission media.

8. Explain the following :

    (i)   Switch

    (ii)   Router

    (iii) Repeater

    (iv)   Hub

    (v)   Proxy Server

Section-C

Objective Type Questions (Compulsory)

Note : Answer all questions. Each question carries 1 Mark.

$$(10 \times 1 = 10)$$

1. If a computer on the network shares resources for others to use, it is called :

    (a) Server   (b) Client

    (c) Mainframe   (c) None of the above

2. Terminators are used in .... topoloyg.

    (a) Bus   (b) Star

    (c) Both a and b   (d) None of the above

3. In .... topology, if a computer's network cable is broken, whole network goes down.

    (a) Bus   (b) Star

    (c) Ring   (d) None of the above

4. For large networks, ... topology is used.

    (a) Bus   (b) Star

    (c) Ring   (d) None of the above

5. ISO stands for :

    (a) International Standard Organization

    (b) International Student Organization

    (c) Integrated Services Organiztion

    (d) None of the above

6. .... Layer decides which physical pathway the data should take.

    (a) Application   (b) Network

    (c) Physical   (d) None of the above

7. ISDN is an example of .... network.

    (a) Circuit switched   (b) packet switched

    (c) Network switched   (d) None of the above

8. X. 25 is an example of .... network.

    (a) Circuit switched   (b) packet swtiched

    (c) Network switched   (d) None of the above

9. .... allows LAN users to share computer programs and data.

    (a) Communication server

    (b) Print server

    (c) File server

    (d) Application server

10. What is the central device in star topology ?

    (a) STP server

    (b) Hub/swtich

    (c) PDC

    (d) Router