

## **BCA-14**

### **Data Communication and Computer Networks**

Bachelor of Computer Applications

(BCA-11/16/17)

Fifth Semester, Examination, 2018

**Time : 3 Hours**

**Max. Marks : 80**

**Note :** This paper is of **eighty (80)** marks containing **three (03)** sections A, B and C. Learners are required to attempt the questions contained in these sections according to the detailed instructions given therein.

#### **Section-A**

##### **(Long Answer Type Questions)**

**Note :** Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. Explain propagation modes of optical fiber with illustration.
2. Explain Intranet and Extranet with suitable example.
3. TCP is a reliable protocol. Why ? Explain with suitable example.
4. Explain briefly function of each layer of OSI reference model.

**Section–B****(Short Answer Type Questions)**

**Note :** Section ‘B’ contains eight (08) short answer type questions of eight (8) marks each. Learners are required to answer *four* (04) questions only.

1. Explain frame format of IEEE 802.3.
2. Explain IPv4 IP addressing with class A, B, C, D and E.
3. Explain connectionless service with suitable example.
4. Explain synchronous mode of communication.
5. Explain two ray ground model.
6. Differentiate hub and switch.
7. What is Full Duplex and Half Duplex mode of communication ?
8. Briefly discuss UTP and STP.

**Section–C****(Objective Type Questions)**

**Note :** Section ‘C’ contains ten (10) objective type questions of one (01) mark each. All the questions of this section are compulsory.

1. In ..... transmission, the channel is shared by shared by both communicating devices but not at the same times.
  - (a) Simplex
  - (b) Half duplex
  - (c) Full duplex
  - (d) Full Simplex

2. Which topology requires a multipoint connection ?
  - (a) Mesh
  - (b) Star
  - (c) Bus
  - (d) Ring
3. The ..... layer changes bits into electromagnetic signals.
  - (a) Network
  - (b) Transport
  - (c) Application
  - (d) Physical
4. NIC stands for ..... .
  - (a) Network Interface Connection
  - (b) Network Interface Card
  - (c) Network Internet Card
  - (d) Network Interface Connectivity
5. Which of the following is related to Bluetooth ?
  - (a) Piconet
  - (b) Scatternet
  - (c) PAN
  - (d) All of the above
6. Unicast is..... method.
  - (a) One to many
  - (b) Many to many
  - (c) Many to one
  - (d) One to one

7. The link to link reliability is responsibility of ..... layer.
- (a) Network
  - (b) Transport
  - (c) MAC
  - (d) Physical
8. TCP is ..... layer protocol.
- (a) Network
  - (b) Transport
  - (c) MAC
  - (d) Physical
9. IEEE 802.3 is standard for ..... .
- (a) Ethernet
  - (b) WLAN
  - (c) MAN
  - (d) None of the above
10. Broadcast is ..... method.
- (a) One to all
  - (b) Many to all
  - (c) Many to one
  - (d) One to one