

BCA–14

Data Communication and Computer Networks

Bachelor of Computer Applications

(BCA–11/16/17)

Fifth Semester, Examination, 2017

Time : 3 Hours

Max. Marks : 80

Note : This paper is of **eighty (80)** marks containing **three (03)** Sections A, B and C. 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 the various types of network topologies. Differentiate them.
2. Explain the working of TCP and UDP as a transport layer protocol. List the differences between these two protocols.
3. Explain the working of Fibre Optic. Also explain single mode and multimode communication mechanism.
4. Explain LAN, WAN and MAN.

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

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

1. What is the advantage of Guided Media ?
2. Explain Piconet and Scatternet.
3. Explain Ground Propagation Model.
4. List the types of firewall. Explain the working of firewalls.
5. Explain the basic features of Ethernet.
6. List and explain the working of physical layer.
7. What is the difference between Half duplex and Full duplex mode of communication.
8. What is an IP ? Explain IP addressing with classes.

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 a _____ connection, more than two devices can share a single link.
 - (a) Point to point
 - (b) Multi point
 - (c) Primary
 - (d) Secondary
2. Which topology requires a multipoint connection ?
 - (a) Mesh
 - (b) Star
 - (c) Bus
 - (d) Ring

3. The _____ is the physical path over which a message travels.
 - (a) Protocol
 - (b) Medium
 - (c) Signal
 - (d) All of the above
4. A _____ is a data communication system spanning states, countries or the whole world.
 - (a) LAN
 - (b) WAN
 - (c) MAN
 - (d) None of the above
5. The Internet model consists of _____ layers.
 - (a) 3
 - (b) 5
 - (c) 7
 - (d) 4
6. The _____ layer changes bits into electromagnetic signals.
 - (a) Network
 - (b) Transport
 - (c) Application
 - (d) Physical
7. IPv6 is of _____ bits.
 - (a) 32
 - (b) 64
 - (c) 128
 - (d) 148

8. WLAN is related to _____.
 (a) IEEE 802.11
 (b) IEEE 802.3
 (c) IEEE 802.15.4
 (d) None of the above
9. DCE stands for _____.
 (a) Data Communication Entry
 (b) Data Common Equipment
 (c) Data Communication Equipment
 (d) None of the above
10. Unicast is _____ method.
 (a) One to many
 (b) Many to many
 (c) Many to one
 (d) One to one