MCA–19

Data Communication and Computer Networks

Master of Computer Application (MCA–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. Give the difference between OSI and TCP/IP model. Which model is more popular and why ?
2. Discuss the network topologies in detail.
3. Explain the method of congestion control.
4. Explain Routing algorithm with suitable example.

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 flow control ?

2. What are the issues of data link layer ?

3. What are responsibilities of network layer ?

4. What are the duties of transport layers ?

5. What is the difference between transport layer delivery and network layer delivery ?

6. What is FTP ?

7. Explain HTTP request.

8. Explain leaky bucket algorithm.

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.

Choose the correct alternative :

1. The Physical layer concerns with :

    (a) bit by bit delivery

    (b) process to process delivery

    (c) application to application

    (d) None of the above

2. Bit can be send over guided and unguided media as analog signal by :

    (a) digital modulation

    (b) amplitude modulation

    (c) frequency modulation

    (d) phase modulation

3. The portion of Physical layer that interfaces with the media access control sublayer is called :

    (a) physical signaling sublayer

(b)   physical data sublayer

(c)   physical address sublayer

(d)   None of the above

4.   Physical layer provides :

(a)   mechanical specification of electrical connectors and cables.

(b)   electrical specification of transmission line signal line

(c)   specification for IR over optical fiber

(d)   All of the above

5.   Which one of the following is a data link protocol ?

(a)   Ethernet

(b)   Point to point

(c)   HDLC

(d)   All of the above

6.   Which one of the following is the multiple access protocol for chemical access control ?

(a)   CSMA/CD

(b)   CSMA/CA

(c)   Both (a) and (b)

(d)   None of the above

7.   CRC stands for :

(a)   Cyclic redundancy check

(b)   Code repeat check

(c)   Code redundancy check

(d)   Cyclic repeat check

8. Multidestination routing :

    (a)   is same as broad cast routing

    (b)   contains the list of all destination

    (c)   data is not sent by packet

    (d)   None of the above

9. A subset of a network that include all the routers but contains no loop is called :

    (a)   Spanning tree

    (b)   Spider structure

    (c)   Spider tree

    (d)   None of the above

10. Which one of the following is a transport layer protocol used in internet ?

    (a)   TCP

    (b)   UDP

    (c)   Both TCP and UDP

    (d)   None of the above