

MCA-19

Data Communication & Computer Network

Master of Computer Application(MCA-11/16/17)

Fifth Semester Examination, 2019 (July)

Time : 3 Hours]

Max. Marks : 80

Note : This paper is of Eighty (80) marks divided into 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 any two (02) questions only.

(2×19=38)

1. Discuss the important design issues for various layers. Write short notes on connection-oriented and connection-less services.
2. Distinguish between TCP/IP and OSI reference models. Which model is more popular and why?

3. What is ISO reference model? Explain the functions of each layer in detail.
4. Write short note on:
 - (a) Digital Transmission
 - (b) Analog Transmission
 - (c) Transmission Media
 - (d) Circuit switching

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 any four (04) questions only. (4×8=32)

1. What is point to point protocol in data link layer?
2. What is local logging and remote logging. Explain each one and differentiate each one with suitable example.
3. What is client server model? Explain.
4. What is the difference between SMTP & FTD ?
5. Why does a router normally have more than one interface?
6. What is HDLC? Explain.
7. Explain the concept & purposes of ALOHA protocol in details with example.
8. What do you understand by Error deletion and correction?

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. (10×1=10)

1. An endpoint of an inter-process communication flow across a computer network is called:
(a) Socket (b) Pipe
(c) Port (d) none of the mentioned.
2. Which one of the following allows a user at one site to establish a connection to another site and then pass keystrokes from local host to remote host?
(a) HTTP (b) FTP
(c) telnet (d) None of mentioned.
3. Which transmission media has the highest transmission speed in a network?
(a) Coaxial cable (b) twist pair cable
(c) optical fiber (d) electrical fiber.
4. The physical layer concerns with:
(a) bit-by-bit delivery
(b) process to process delivery
(c) application to application delivery
(d) none of the mentioned.

5. The physical layer is responsible for:
- (a) line coding
 - (b) channel coding
 - (c) modulation
 - (d) All of the mentioned.
6. The network layer concerns with:
- (a) Bits
 - (b) Frames
 - (c) Packets
 - (d) None of the mentioned.
7. Transport layer aggregates data from different applications into a single stream before passing it to :
- (a) network layer
 - (b) data link layer
 - (c) application layer
 - (d) physical layer.
8. Transmission control protocol is:
- (a) Connection oriented protocol
 - (b) uses a three way handshake to establish a connection
 - (c) receives data from application as a single stream
 - (d) All of the mentioned.
9. When collection of various computers seems a single coherent system to its client, then it is called:
- (a) Computer network
 - (b) distributed system
 - (c) Both (a) and (b)
 - (d) None of the mentioned
10. Bluetooth is an example of:
- (a) personal area network
 - (b) local area network
 - (c) virtual private network
 - (d) None of the mentioned