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Total No. of Pages : 02

Total No. of Questions : 09

MCA (2015 & Onwards) (Sem.-2)
DATA COMMUNICATION AND NETWORKS
Subject Code : MCA-204
Paper ID : [72879]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

- 1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students has to attempt any ONE question from each SECTION.**
- 2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**

SECTION-A

1.
 - a) What is meant by modulation? Discuss the procedure for performing amplitude modulation of a signal. (5)
 - b) Explain the effect of noise on Coaxial cable and twisted pair cable. (5)
2. Discuss the following :
 - a) TCP/IP protocol stack (5)
 - b) Switching in Wide Area Network (5)

SECTION-B

3. How error control is carried out in data link layer? Discuss various protocol used for error control. (10)
4. Write a short note on the following :
 - a) Pure ALOHA and Slotted-ALOHA (5)
 - b) IEEE 802.5 standards (5)

SECTION-C

5. What are different advantages of flooding algorithm over distance vector routing? Explain. (10)
6. Explain the following by taking an example of each :
 - a) ARP (4)
 - b) Trace Route (3)
 - c) Nslookup (3)

SECTION-D

7.
 - a) Discuss the services of flow control offered by transport layer. (5)
 - b) Explain the phenomenon of buffering in transport layer. (5)
8.
 - a) How HTTP differs from HTTPS? Explain. (5)
 - b) What is Domain Name System? Explain the communication of Application layer with WWW. (5)

SECTION-E

9. **Write briefly :**
 - a) Define Multiplexing.
 - b) Services of Session layer.
 - c) Compare briefly OSI with TCP/IP.
 - d) Discuss the speed of transmission of fiber optics.
 - e) Describe the working Cellular radio.
 - f) What is meant by CSMA/CD?
 - g) Discuss the working of wireless transmission briefly.
 - h) Describe Leaky bucket algorithm.
 - i) How many addresses of Class B are reserved for host?
 - j) List two uses of presentation layer. (2×10=20)