Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

MCA (2014 Batch)   (Sem.–2)
DATA COMMUNICATION AND NETWORKS
Subject Code : MCA-204
M.Code : 26055

Time : 3 Hrs.   Max. Marks : 100

INSTRUCTION TO CANDIDATES :
1. **SECTIONS-A, B, C & D contains TWO questions each carrying TWENTY 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

Q1 a) Discuss different switching techniques of data communication.

   b) What are wireless networks? Explain the concept of Internetworks.

Q2 Write a short notes on the following :

   a) Twisted pair

   b) Transport layer of OSI

   c) ATM

   d) Satellite Communication

SECTION-B

Q3 a) What is meant by error control? Why is it required? Explain.

   b) Discuss the services offered by IEEE 802.4 and IEEE 802.5 standards.

Q4 What are limited contention protocols? Discuss wireless LAN in detail.

SECTION-C

Q5 a) Differentiate Hierarchical and shortest path routing.

b) What is meant by IP protocol? Explain its working in detail.

Q6 Explain the following :

a) ARP

b) Token Bucket Algorithm

c) Traceroute

d) Ping

SECTION-D

Q7 a) Discuss the concept of flow control at transport layer.

b) Discuss the working of UDP protocol in detail.

Q8 Explain the following by taking suitable example :

a) Email

b) HTTP and HTTPS

SECTION-E

Q9 Write briefly :

a) What is World Wide Web?

b) Name the different layers of TCP/IP model.

c) Discuss briefly about fiber optics communication.

d) Why is logical link layer required?

e) Comment on "*channel allocation*".

f) Describe the services offered by MAC layer.

g) Enlist any two issues of Flooding algorithm.

h) How is troubleshoot provided by netstat?

i) Discuss two features of TCP.

j) Name any two protocols at Application layer of TCP/IP model.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.