

Roll No.

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Total No. of Pages : 02

Total No. of Questions : 09

MCA (2015 Batch) (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. Describe the functions of the various layers of the OSI model.
2. Describe the construction and physical properties of twisted pair, coaxial cable and fiber optic cable.

SECTION B

3. What is framing? What are various methods used for framing? Explain them with examples.
4. Compare the important features of ALOHA, CSMA and CSMA/CD protocol with examples.

SECTION C

5. Explain the Dijkstra's shortest path routing algorithm with example.
6. Write short notes on traceroute and ipconfig.

SECTION D

7. Explain the meaning of various fields of TCP protocol header.
8. Write short note on HTTP protocol.

SECTION E

9. Write briefly :

- i. Define baud rate.
- ii. What is switching?
- iii. What is PRI?
- iv. What is cell breathing?
- v. List two important features of Go-Back-n protocol.
- vi. What is the minimum and maximum value of header length field of IPv4 header and why?
- vii. What is the purpose of ARP protocol?
- viii. Define congestion.
- ix. What is wireless adhoc network?
- x. What are ports?