

Roll No. 

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Total No. of Pages : 02

Total No. of Questions : 09

**MCA (2013 and 2019 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**

1. What are the various transmission media used in computer networks? Discuss the wireless transmission media in detail.
2. Compare and contrast OSI and TCP reference models. Give areas where each of these is used.

**SECTION-B**

3. What are the steps in the error control mechanism at the Data Link Layer? Discuss the three techniques for error control in the Data Link Layer.
4. Explain the working of the various CSMA protocols with a flowchart.

**SECTION-C**

5. Differentiate between interior and exterior gateway routing protocols and explain the Exterior Gateway Routing Protocol in detail.
6. Discuss the various techniques for troubleshooting the network problems.

**SECTION-D**

7. What do you mean by User Data Protocol (UDP)? How is it different from TCP? Discuss the working of UDP in detail.
8. What do you mean by Domain Name System (DNS)? Explain how DNS works? Discuss in detail about DNS records and DNS messages.

## SECTION-E

### 9. Write briefly :

- a. What do you mean by digital transmission?
- b. How circuit switching is different from packet switching?
- c. Define virtual circuits.
- d. Differentiate between LAN and WAN.
- e. What do you mean by congestion?
- f. Briefly discuss IEEE 802.5.
- g. Write short note on internetworking.
- h. What do you mean by IP protocol?
- i. Write short note on WWW.
- j. Compare Flooding and Broadcast routing

**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.**