

Roll No.

Total No. of Pages : 2

Total No. of Questions : 09

MCA (Sem.-2)

DATA COMMUNICATION NETWORKS

Subject Code : MCA-203

Paper ID : [B0108]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION 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 carrying TWENTY marks in all.
3. Use of non-programmable scientific calculator is allowed.

SECTION-A

1. What is Multiplexing? Explain FDM & TDM in detail. 10
2. a) Demonstrate with the help of suitable example how the digital data is suitable for communication purposes than analog data? 5
- b) Explain Fourier Analysis. 5

SECTION-B

3. Differentiate between OSI & TCP/IP model. Explain TCP/IP in detail. 10
4. a) Discuss various Transmission media in detail 5
- 5

SECTION-C

5. Explain Sliding Window Protocols. 10
6. a) Discuss IEEE 802 standard for LAN & WAN. 5
- b) Explain distance vector routing. 5

SECTION-D

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| 7. | Discuss various elements of Transport Protocols. | 10 |
| 8. | a) Explain TCP Connection management. | 5 |
| | b) What are the design issues of transport layer? Explain. | 5 |

SECTION-E

9. Write briefly :
- a) Why we need multiplexing in communication channels?
 - b) Explain Token passing.
 - c) What are important characteristics of STDM?
 - d) What is TCP/IP Protocol? How it is different from OSI Layer?
 - e) Discuss band width limitation.
 - f) Discuss ALOHA.
 - g) Explain Error detection & correction.
 - h) How leaky bucket algorithm is different from token bucket algorithm?
 - i) Discuss flow control & buffering.
 - j) Discuss the design issue of Data link layer.