TMC–203

M. C. A. (SECOND SEMESTER)
MID SEMESTER
EXAMINATION, April, 2023
COMPUTER NETWORKS

Time : 1½ Hours

Maximum Marks : 50

Note : (i) Attempt all questions choosing any *one* of the sub-questions.

(ii) Each sub-questions carries 10 marks.

1. (a) What do you mean by computer network ? Classify computer networks and various networks criteria in detail.   (CO1)

OR

(b) What is the purpose of OSI and TCP/IP models in computer networks ? How are the OSI model layers segregated by their functions ?   (CO1)

2. (a) How the Email system works ? Explain the process of email system with the help of SMTP, MIMIE, POP and IMAP protocols. (CO2)

OR

(b) Why HTTP protocol is used in application layer ? Discuss the Non-persistent and Persistent connections of HTTP protocol in detail. (CO2)

3. (a) What do you mean by topologies in computer networks ? Explain the different types of topologies based on the following points : (CO1)
   (i) Number of cables required
   (ii) Number of ports required
   (iii) Advantages and disadvantages

OR

(b) What is the significance of switching ? Explain the various switching techniques with a neat and clean diagram. (CO1)

4. (a) What is the use of Domain Name System (DNS) ? Explain the Domain Name, Name spaces and Name-address resolution techniques in detail. (CO2)

OR

(b) Discuss the principles and architectures of network applications in detail. (CO2)

5. (a) What is data communication system in computer networks ? Discuss the data communication components, characteristics and modes of data flow in detail. (CO1)

OR

(b) What is p2p file distribution in computer networks ? Explain the working of Bit Torrent in detail. (CO2)