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Roll No. ....

**TCS-703**

**B. TECH. (CS/IT)**

**(SEVENTH SEMESTER)**

**MID SEMESTER EXAMINATION, 2022**

**COMPUTER NETWORKS—II**

**Time : 1½ Hours**

**Maximum Marks : 50**

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

(ii) Each question carries 10 marks.

1. (a) Explain the following with suitable diagram : (CO1)

(i) Dijkstra's algorithm for shortest path

(ii) Routing for mobile host

**OR**

(b) Explain the following with suitable diagram : (CO1)

(i) Distance vector routing

(ii) Link state routing

**P. T. O.**

2. (a) What is hamming code ? How can we use the hamming code to correct burst error ? If the 7-bit hamming codeword received is 1011011, assuming the even parity state whether the received codeword is correct or wrong. If wrong locate the bit  $n$  error.

(CO2)

OR

- (b) Explain Cyclic Redundancy Check (CRC). A bit stream 1101011011 is transmitted using the standard CRC method. The generator polynomial is  $x^4 + x + 1$ . What is the actual bit string transmitted ? (CO2)
3. (a) Explain channel allocation problem in networks. Discuss any *one* technique for solving channel allocation problem with suitable diagram. (CO2)

OR

- (b) Explain the following terms : (CO2)
- (i) Collision free protocols
  - (ii) Limited contention protocols

(3)

4. (a) What are the various connecting devices used in networks ? Also explain advantages and limitation of each connecting device. (CO1)

OR

- (b) Write difference between the following : (CO1)

- (i) Bridge and Switches
- (ii) Gateway and Router

5. (a) Discuss Broadcast and Multicast Routing with suitable example. (CO1 and CO2)

OR

- (b) Discuss the following error detection methods with suitable example :

(CO1 and CO2)

- (i) Parity check method
- (ii) Checksum method