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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

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(2)

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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

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