*R22 Regulation* *Subject code: 4O8DA*

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

## B.Tech VIII Semester Regular Examinations, May 2026

## Computer Networks

*(ECE)*

*Maximum Marks: 60* Date: 08.05.2026 Duration: 3 hours

**Note:** **1.This question paper contains two parts A and B.**
**2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.**
**3. Part B consists of 5 Units. Answer any one full question from each unit.**
**4. Each question carries 10 marks and may have a, b, c, d as sub questions.**

Part-A

| All the following questions carry equal marks (10X1M=10 Marks) | | Marks | CO | BTL |
|---|---|---|---|---|
| 1.a) | Write main difference between OSI and TCP/IP? | 1 | 1 | BTL2 |
| b) | What is the function of the physical layer in the OSI model? | 1 | 1 | BTL2 |
| c) | What type of errors can CRC detect? | 1 | 2 | BTL1 |
| d) | What is the purpose of acknowledgements? | 1 | 2 | BTL1 |
| e) | What is mobility in networking? | 1 | 3 | BTL1 |
| f) | What is routing? | 1 | 3 | BTL1 |
| g) | What is process-to-process communication? | 1 | 4 | BTL1 |
| h) | What is congestion control? | 1 | 4 | BTL1 |
| i) | What is MIME? | 1 | 5 | BTL1 |
| j) | What is the World Wide Web? | 1 | 5 | BTL1 |

Part-B

| Answer All the following questions. (5X10M=50Marks) | | Marks | CO | BTL |
|---|---|---|---|---|
| 2 | A) Explain the structure of the OSI Model.<br>B) Explain the features of ARPANET. | 5<br>5 | 1 | BTL2 |
| | OR | | | |
| 3 | Explain various transmission media such as copper cables, twisted pair, and wireless communication used in the Physical Layer. Discuss their advantages and disadvantages. | 10 | 1 | BTL2 |
| 4 | A) Analyze the importance of flow control and error control.<br>B) Compare ALOHA and CSMA. | 5<br>5 | 2 | BTL3 |
| | OR | | | |
| 5 | Explain elementary data link protocols such as Stop-and-Wait and Sliding Window Protocol in detail. | 10 | 2 | BTL2 |
| 6 | Explain the concepts of Virtual Circuit and Datagram subnets. Compare their advantages and disadvantages. | 10 | 3 | BTL2 |
| | OR | | | |
| 7 | A) Compare broadcast and multicast routing.<br>B) Describe how routing tables are updated in dynamic routing. | 5<br>5 | 3 | BTL4 |

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|---|---|---|---|---|
| 8 | A) Explain the services provided by the Transport Layer.<br>B) Explain the phases of connection management in TCP. | 5<br>5 | 4 | BTL2 |
| | OR | | | |
| 9 | A) Compare TCP and UDP protocols.<br>B) Describe different types of AAL protocols. | 5<br>5 | 4 | BTL4 |
| 10 | Describe the working of Simple Network Management Protocol. Explain SNMP messages. | 10 | 5 | BTL2 |
| | OR | | | |
| 11 | A) Explain the working of SMTP.<br>B) Analyze HTTP request and response message format. | 5<br>5 | 5 | BTL3 |