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Question Paper Code	12704
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**B.E. / B.Tech., - DEGREE EXAMINATIONS, APRIL / MAY 2024**

Sixth Semester

**Electronics and Instrumentation Engineering**

**20ESCS601 - COMPUTER NETWORKS**

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

*Marks* *K-  
Level* *CO*

- |   |   |    |     |
|---|---|----|-----|
| 1. Name the factors that affect the performance of the network. | 2 | K1 | CO1 |
| 2. Define Bandwidth and Latency.                                | 2 | K1 | CO1 |
| 3. State the functions of LLC.                                  | 2 | K1 | CO2 |
| 4. Define Ethernet.   | 2 | K1 | CO2 |
| 5. State the functions of router.                               | 2 | K2 | CO3 |
| 6. Define Routing Area. State its importance.                   | 2 | K1 | CO3 |
| 7. How the errors are detected in IP?                           | 2 | K1 | CO4 |
| 8. Explain additive increase/multiplicative decrease in TCP.    | 2 | K2 | CO4 |
| 9. Give the format of HTTP request message.                     | 2 | K1 | CO5 |
| 10. Write the function of SMTP.                                 | 2 | K2 | CO5 |

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

- |   |    |    |     |
|---|----|----|-----|
| 11. a) Explain in detail about the components used in data communication.                                 | 13 | K2 | CO1 |
| <b>OR</b>   |    |    |     |
| b) Explain in detail about network topologies with their advantages, disadvantages.                       | 13 | K2 | CO1 |
| 12. a) Describe in detail about Link Layer Addressing and DLC services offered.                           | 13 | K2 | CO2 |
| <b>OR</b>   |    |    |     |
| b) Explain in detail about Stop and Wait Protocol.  | 13 | K2 | CO2 |
| 13. a) Explain Distance Vector Routing with example.  | 13 | K2 | CO3 |
| <b>OR</b>   |    |    |     |
| b) Illustrate in detail about IPv6 listing the packet format, fragmentation process and address notation. | 13 | K2 | CO3 |

*K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create*

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14. a) Explain in detail about SCTP. 13 K2 CO4

**OR**

b) Explain in detail about TCP. 13 K2 CO4

15. a) Explain DNS in detail. 13 K2 CO5

**OR**

b) Explain about HTTP. 13 K2 CO5

**PART - C (1 × 15 = 15 Marks)**

16. a) Discuss briefly various layers, functions of OSI Model with neat diagrams. 15 K2 CO2

**OR**

b) Tabulate the shortest path between all nodes for the following network using DVR. 15 K2 CO3

