**Department of Artificial Intelligence and Machine Learning**

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| **Subject Name: Computer Networks** |
| **Subject Code: BCS502** |
| **SEM: V** |
| **Faculty: Ms. Ramya H** |

**Module-1 Question Bank**

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| **SL no** | **Question** | **CO** | **Level** | **Marks** | **Module** |
| 1. | What is Data Communication. Explain the fundamental Characteristics and components of Data Communication. | CO1 | L1 | 5 | 1 |
| 2. | Explain TCP/IP reference model with diagram? | CO1 | L2 | 10 | 1 |
| 3. | Explain the following networking devices in detail  a) Switch b) Router c) Bridge  d) Gateway e) Repeater f) Hub | CO1 | L2 | 6 | 1 |
| 4. | Write a note on point to point and Multipoint connection | CO1 | L1 | 5 | 1 |
| 5. | What is network topology? Explain the different network topologies. | CO1 | L1 | 10 |  |
| 6. | Explain the concept of switching and types of switching. | CO1 | L2 | 10 | 1 |
| 7. | Explain guided transmission media with diagram? | CO1 | L2 | 10 | 1 |
| 8. | Explain types of unguided media | CO1 | L2 | 10 | 1 |
| 9. | Explain in brief about coaxial cable | CO1 | L2 | 10 | 1 |
| 10. | Write a note on fiber optic cable | CO1 | L1 | 10 | 1 |
| 11. | Write a note on Datagram network | CO1 | L1 | 10 | 1 |
| 12. | Explain briefly about virtual circuit switching network | CO1 | L2 | 10 | 1 |
| 13. | What is protocol layering? What are its advantages and disadvantages | CO1 | L1 | 10 | 1 |
| 14. | Explain OSI model with neat diagram | CO1 | L2 | 10 | 1 |
| 15. | Mention types of packet switching. Explain any one type with neat diagram | CO1 | L2 | 6 | 1 |

**Module-2 Question Bank**

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| **SL#** | **Question** | **CO** | **Level** | **Marks** | **Module** |
| 1. | What is Error? Explain types of error | CO2 | L1 | 5 | 2 |
| 2. | Write a note on Data link control services | CO2 | L1 | 10 | 2 |
| 3. | Differentiate between character oriented and bit-oriented format for Framing | CO2 | L4 | 5 | 2 |
| 4. | Explain CRC with block diagram & an example. | CO2 | L2 | 10 | 2 |
| 5. | Explain the concept of checksum | CO2 | L2 | 10 | 2 |
| 6. | Compare flow control and error control | CO2 | L4 | 5 | 2 |
| 7. | Describe the following:  1) Fletcher checksum 2) Adler checksum | CO2 | L2 | 10 | 2 |
| 8. | Explain Stop-and-Wait protocol | CO2 | L2 | 10 | 2 |
| 9. | Explain in detail about Pure ALOHA and Slotted ALOHA. | CO2 | L2 | 10 | 2 |
| 10. | Explain HDLC protocol in detail. Explain three structures of HDLC frames. Briefly explain control field of S frame. | CO2 | L2 | 10 | 2 |
| 11. | Explain Point to Point protocol in detail. | CO2 | L2 | 10 | 2 |
| 12. | What is CSMA? Explain three persistent methods of CSMA | CO2 | L2 | 10 | 2 |
| 13. | Explain CSMA with Collision Detection (CSMA/CD). | CO2 | L2 | 10 | 2 |
| 14. | Explain CSMA with Collision Avoidance (CSMA/CA). | CO2 | L2 | 10 | 2 |
| 15. | Explain in brief about controlled access | CO2 | L2 | 10 | 2 |
| 16. | List services of networking layer. Explain any three | CO2 | L2 | 10 | 2 |

**Faculty Signature**