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| **QUESTIONBANK(DESCRIPTIVE)**  **Subject Name with Code: (23A0519T)**  **Course & Branch: B.TECHCSE, CSE(DS)&CSE(CS) Year& Semester: II-IIRegulation: RG23** | |

**UNIT - I**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | What is Broad band Network? | L1/CO1/2M |
|  | What is a Home Network? | L1/CO1/2M |
|  | define mobile and wireless network ? | L1/CO1/2M |
|  | What is the Transit Network? | L1/CO1/2M |
|  | What are the Service Primitives? | L1/CO1/2M |
|  | What is meant by Internetworks? | L1/CO1/2M |
|  | **Describe types of wireless networks?** | L2/CO1/2M |
|  | Describe Content Provider Networks? | L2/CO1/2M |
|  | **Explain Enterprise network?** | L1/CO1/2M |
|  | Discuss Network Protocols? | L2/CO1/2M |
|  | | |
|  | What is a computer network? Explain PAN, LAN, MAN and WAN with examples? | L2/CO1/10M |
|  | a) Discuss Broadband Access Networks and their significance?  b) Critique the TCP/IP Reference Model? | L2/CO1/10M |
|  | a) What are Mobile and Wireless Access Networks? Provide examples?  b) Describe Content Provider Networks and their role in internet architecture.? | L2/CO1/10M |
|  | a) Compare Network technology from local to global levels?  b) Explain the OSI Reference Model and its layers? | L2/CO1/10M |
|  | a) Explain Transit Networks and their importance in internet connectivity?  b) What are Network Protocols and their design goals? | L2/CO1/10M |
|  | a) Analyze the structure and components of Enterprise Networks?  b) Compare Network technology from local to global levels? | L4/CO1/10M |
|  | a) Define and purpose of service protocols?  b) Discuss connections and reliabilities? | L2/CO1/10M |

**UNIT - II**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | What is Guided Transmission Media? | L1/CO2/2M |
|  | What is Persistent Storage? | L1/CO2/2M |
|  | Describe Twisted Pair Cables? | L3/CO2/2M |
|  | What are Fiber Optics? | L1/CO2/2M |
|  | What is Error Control in the Data Link Layer? | L1/CO2/2M |
|  | Define Flow Control in the Data Link Layer? | L1/CO2/2M |
|  | What is a Simplex Link-Layer Protocol? | L1/C02/2M |
|  | Describe the Sliding Window Protocol? | L2/CO3/2M |
|  | What is the Channel Allocation Problem? | L1/CO3/2M |
|  | What is CSMA/CD? | L1/CO3/2M |
| **Descriptive Questions (Long)** | | |
|  | Explain the differences between Guided Transmission Media types: Twisted Pairs, Coaxial Cable, and Fiber Optics.? | L1/CO2/10M |
|  | Describe Data Link Layer Design Issues and Services Provided to the Network Layer? | L2/CO2/10M |
|  | Compare Error-Detecting and Error-Correcting Codes? | L4/CO2/10M |
|  | Explain the principles of Sliding Window Protocols and their importance.? | L2/CO2/10M |
|  | Choose the Multiple Access Protocols: Aloha, Slotted Aloha, CSMA, CSMA/CD, and CSMA/CA? | L3/CO3/10M |
|  | Describe the Classic Ethernet Physical Layer and its components? | L3/CO2/10M |
|  | a) Compare Ethernet Performance: Classic Ethernet, Fast Ethernet, Gigabit Ethernet, and 10Gigabit Ethernet?  b) Analyze the development and advantages of Switched Ethernet? | L4/CO3/10M |
|  | a) Apply the Channel Allocation Problem and its solutions?  b) Describe the assumptions for Dynamic Channel Allocation and their impact.? | L3/CO2/10M |
|  | Explain about Various Types of wireless protocols? | L2/CO2/10M |

**UNIT - III**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | What are Network Layer Design Issues? | L1/CO4/2M |
|  | Describe Store-and-Forward Packet Switching? | L3/CO4/2M |
|  | What services are provided to the Transport Layer by the Network Layer? | L1/CO4/2M |
|  | How is Connection-less Service implemented in the Network Layer? | L4/CO4/2M |
|  | How is Connection-Oriented Service implemented in the Network Layer? | L4/CO4/2M |
|  | Compare Virtual-Circuit and Datagram Networks? | L4/CO4/2M |
|  | What is the Shortest Path Algorithm? | L1/CO4/2M |
|  | Explain the Flooding Routing Algorithm? | L2CO4/2M |
|  | What is Distance Vector Routing? | L1/CO4/2M |
|  | Describe the role of IP Addresses in the Network Layer? | L4/CO4/2M |
| **Descriptive Questions (Long)** | | |
|  | Define switching? Explain Virtual circuit switching techniques? | L3/CO4/10M |
|  | Compare Virtual-Circuit and Datagram networks? | L4/CO4/10M |
|  | a) Explain briefly about the shortest path routing algorithm?  b) Discuss the following: i) Broadcast Routing ii) Multicast Routing? | L2/CO4/10M |
|  | Compare IPv4 and IPv6 protocols? | L4/CO4/10M |
|  | a) Explain Link State Routing with an example?  b) Distance Vector Routing algorithm with suitable example? | L2/CO4/10M |
|  | Explain routing algorithms in a single network with examples? | L2/CO4/10M |
|  | a) What is the Optimality Principle in routing, and how is it applied?  b) Explain the process of Packet Fragmentation and Reassembly? | L2/CO4/10M |
|  | Distinguish between interior gateway routing protocol and exterior gateway protocol? | L2/CO4/10M |

**UNIT - IV**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | What is the Transport Service? | L1/CO5/2M |
|  | What services are provided to the upper layers by the Transport Layer? | Distinguish between interior gateway routing protocol and exterior gateway protocol? |
|  | What are the Transport Service Primitives? | L1/CO5/2M |
|  | What are Berkeley Sockets? | L1/CO5/2M |
|  | Give an example of socket programming? | L3/CO5/2M |
|  | What are the elements of transport protocols? | L2/CO5/2M |
|  | What is multiplexing in the context of transport protocols? | L3/CO5/2M |
|  | What is the purpose of congestion control in the transport layer | L2/CO5/2M |
|  | What is the UDP segment header? | L2/CO5/2M |
|  | Describe TCP connection establishment? | L2/CO5/2M |
| **Descriptive Questions (Long)** | | |
|  | Discuss the transport service and its importance in networking? | L2/CO5/10M |
|  | Explain the services provided by the Transport Layer to the upper layers? | L2/CO5/10M |
|  | What are Transport Service Primitives? Provide examples? | L1/CO5/10M |
|  | Describe Berkeley Sockets and their role in network programming? | L4/CO5/10M |
|  | Provide an example of socket programming: An Internet File Server? | L4CO5/10M |
|  | Explain the elements of transport protocols: Addressing, Connection Establishment, Connection Release, Error Control, and Flow Control? | L2/CO5/10M |
|  | Discuss congestion control and its significance in the transport layer? | L3/CO5/10M |
|  | Compare UDP and TCP protocols in the transport layer? | L4/CO5/10M |
|  | a) Discuss about wireless issues?  b) what is Desirable bandwidth Allocation? | L2/CO5/10M |

**UNIT - V**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | What is the role of a User Agent in electronic mail? | L2/CO6/2M |
|  | Describe the standard message format for electronic mail? | L4/CO6/2M |
|  | What is message transfer in electronic mail? | L1/CO6/2M |
|  | Explain the concept of final delivery in electronic mail? | L2/CO6/2M |
|  | What is a static web object? | L1/CO6/2M |
|  | How do dynamic web pages differ from static web pages? | L4/CO6/2M |
|  | What is the purpose of HTTPS in web communication | L1/CO6/2M |
|  | Describe the role of Content Delivery Networks (CDNs)? | L2/CO6/2M |
|  | What is a peer-to-peer (P2P) network? | L1/CO6/2M |
|  | Outline the key milestones in the evolution of the internet? | L4/CO6/2M |
| **Descriptive Questions (Long)** | | |
|  | Describe the architecture and services of electronic mail? | L2/CO6/10M |
|  | Explain the role and functions of the User Agent in electronic mail? | L1/CO6/10M |
|  | Differentiate between static web objects and dynamic web pages? | L4/CO6/10M |
|  | Describe the role of Content Delivery Networks (CDNs) and their benefits? | L2/CO6/10M |
|  | Outline the evolution of the internet and key milestones? | L3/CO6/10M |
|  | a) Explain Peer-to-Peer (P2P) Networks in detail?  b) What is content delivery Networks? | L1/CO6/10M |
|  | a) Discuss about HTTP and HTTPS?  b) Apply the concept of Server farms and web proxies? | L2/CO6/5M  L3/CO6/5M |
|  | a) Discuss Static web and Objects?  b) Describe dynamic web pages? | L2/CO6/10M |

**Signature of the Staff: A. Ramesh**

**Signature of Department Academic Committee Member 1:**

**Signature of Department Academic Committee Member 2:**

**Signature of Department Academic Committee Member 3:**