

**MARUDHAR KESARI JAIN COLLEGE FOR WOMEN, VANIYAMBADI**

**PG AND RESEARCH DEPARTMENT OF COMPUTER SCIENCE**

**QUESTION BANK**

**SUBJECT : DATA COMMUNICATION AND NETWORK**

**SUBCODE: UECS63C**

**UNIT I**

**SECTION A (2 MARKS)**

1. What is digital signal? (U) (APR/MAY 2019)
2. State the role of transmission media. (U) (APR/MAY 2019)
3. What are the three criteria necessary for an effective and efficient network?
4. Group the OSI layers by function
5. What are the features provided by layering?
6. What are the two interfaces provided by protocols?
7. What is LAN?
8. What is MAN?
9. What is WAN?
10. Define Physical Layer.

**SECTION B (5 MARKS)**

1. Illustrates the simple model of communication with neat diagram. (U) (APR/MAY 2019)
2. Discuss about Digital Transmission. (U) (APR/MAY 2019)
3. Explain about components of Data communication network.
4. Explain about Network Twisted pair cable.
5. Explain about Fiber Optic cable.
6. Explain about Transmission medium.
7. Explain about Guided media.
8. Explain about Reflection and Refractions.
9. Explain about cable TV.
10. Explain about Physical layer functions.

**SECTION C (10 MARKS)**

1. Explain about various transmission media for data communication.(U) (APR/MAY 2019)
2. Explain about Network Hardware.
3. Explain about Network Software.
4. Explain in detail about Physical Layer.
5. Explain in detail about unguided media.

## **UNIT II**

### **SECTION A (2 MARKS)**

1. What is flow control? (U) (APR/MAY 2019)
2. Compare analog signaling with digital signaling. (U) (APR/MAY 2019)
3. What is the purpose of synchronous transmission? (U) (APR/MAY 2019)
4. Define data link layer.
5. What are the issues in data link layer?
6. What are the responsibilities of data link layer?
7. Mention the types of errors.
8. What is the purpose of Ethernet?
9. What is redundancy?
10. What is OSI?

### **SECTION B (5 MARKS)**

1. How to transmit digital data using analog signals? Explain. (U) (APR/MAY 2019)
2. Illustrate Asynchronous transmission with a neat diagram. (U)(APR/MAY 2019)
3. Explain about Multiple Access protocol.
4. Explain about Media access control.
5. Explain about CSMA.
6. Explain about standard Ethernet.
7. Explain about Data link layer switching.
8. Explain about Data link layer functions.
9. Explain about Spanning Tree in Data link layer.
10. Explain about Bridges

### **SECTION C (10 MARKS)**

1. Explain in detail about Data link layer functions.(U) (APR/MAY 2019)
2. Explain in detail about Channel allocation problem.
3. Explain in detail about multiple access protocol.
4. Explain about Wireless LAN.
5. Explain about 802.11 Architecture.

### **UNIT III**

#### **SECTION A (2 MARKS)**

1. How to make efficient use of high –speed telecommunications lines? (U) (APR/MAY 2019)
2. What is meant by switched communication networks? (U)(APR/MAY 2019)
3. What are the responsibilities of Network Layer?
4. What is DHCP?
5. Define Ethernet.
6. What is the need of internetwork?
7. Define the term medium access control mechanism.
8. What is bridge?
9. Define router.
10. What is a repeater?

#### **SECTION B (5 MARKS)**

1. State the mechanism available to detect and correct error that occurs in the transmission of frames. Explain. (U) (APR/MAY 2019)
2. Compare Synchronous TDM compared with Statistical TDM.
3. Explain about Design issues in Network layer.
4. Explain about Ethernet.
5. Explain about Flooding.
6. Explain about Broadcasting.
7. Explain about Multicast routing congestion.
8. Explain about Internetworking.
9. Explain about shortest path routing.
10. Explain about Distance vector routing

#### **SECTION C (10 MARKS)**

1. Describe the Multiplexing. (U) ( APR/MAY 2019)
2. Explain about Routing algorithm.
3. Explain about Congestion control.
4. Explain in detail about Network layer.
5. Explain about Broadcasting.

## UNIT IV

### SECTION A (2 MARKS)

1. What is Congestion control? (U) (APR/MAY 2019)
2. Define Transport Layer.
3. What are the fields on which the UDP checksum is calculated? Why?
4. What are the advantages of using UDP over TCP?
5. What is TCP?
6. List the flag used in TCP header.
7. Give the approaches to improve the QoS.
8. What do you mean by QoS?
9. What is multiplexing?
10. What is a port?

### SECTION B (5 MARKS)

1. Explain the concept of communication via circuit switching. (U)( APR/MAY 2019)
2. Discuss about any two routing strategies.
3. Transport Service Primitives
4. What is Packet Fragmentation?
5. Explain about Inter-network Routing?
6. Explain about TCP.
7. Explain about UDP.
8. Explain about Congestion control.
9. Explain about Multiplexing.
10. Explain about Connection establishment.

### SECTION C (5 MARKS)

1. Compare circuit and Packet switching. (U)( APR/MAY 2019)
2. Explain about Transport service.
3. Explain about Elements of transport protocol.
4. Explain about Transport layer.
5. Explain about Transmission control protocol.

## **UNIT V**

### **SECTION A (2 MARKS)**

1. Define Application Layer. (U)APR/MAY 2019
2. What is DNS? (U)APR/MAY 2019
3. What is SMTP?
4. What is the purpose of inverse domain?
5. What is the Domain name system responsible for?
6. What is SMTP used for?
7. Define WWW?
8. What is URL?
9. What are the responsibilities of Application Layer?
10. Define Network Security.

### **SECTION B (5 MARKS)**

1. Discuss about Frame Relay. (U) APR/MAY 2019
2. Write about Packet switching. (U)APR/MAY 2019
3. Explain about WWW.
4. Explain about Multimedia.
5. Explain about Network concept.
6. Explain services of Application layer.
7. Explain about Application layer protocol.
8. Explain about network services in Application layer.
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### **SECTION C (10 MARKS)**

1. Explain about Frame Relay Congestion Control. (U) APR/MAY 2019
2. Explain about Application layer Functions in detail.
3. Explain about DNS in detail.
4. Explain about Multimedia concepts in detail.
5. Explain about Network security in detail.

