**CN Mid-1 Question Bank**

**UNIT-1**

1. a) Compare and contrast the OSI and TCP/IP reference models. [7M]

b) Explain about Fiber optic cable? What are the types of Fiber      optic cable?

[7M]

1. a) What is Network topology? List any 3 network topologies. [7M]

b) Explain the functionality of each layer in OSI reference model. [7M]

3. a) Explain the layers of TCP/IP reference model. [7M]

b) Differentiate Radio waves and Microwaves in details. [7M]

1. a) Explain about various transmission media in physical layer with a neat sketch. [7M]

b) Discuss the similarities and differences between OSI and TCP/IP reference models. [7M]

1. a) Describe any two Guided transmission media options. [7M]

b) Summarize the classification of Network types. [7M]

1. a) Differentiate LAN, MAN and WAN network topologies. [7M]

b) Explain about Transport layer and Presentation layer with neat diagrams.

**UNIT-2**

1. a) What are the different types of error detection methods? Explain the CRC error detection technique using generator polynomial x4+x3+1 and data 11100011. [7M]

[7M]

b) Explain the working of unrestricted simplex protocol, what are the restrictions placed on other protocols? [7M]

1. a) What is meant by Error in data link layer? Discuss about Error Detection and Correction in Data link Layer.[7M]

b) Discuss about working Principle of a One-Bit Sliding Window Protocol with example.[7M]

1. a) Elaborate on the design issues of Data link layer. [7M]

b) Explain Error Detection Techniques in Data link Layer. [7M]

4. a) Compare and contrast the Go-Back-NARQ Protocol with Selective-RepeatARQ.

[7M]

b) Draw the frame format of HDLC and explain its configuration and transfer modes.

5. Define Framing. Explain various methods used for framing. [14M]

6. a) Explain framing and transition phases of Point-to-Point Protocol.[7M] [7M]

b) Write in detail about CRC algorithm with an example.[7M]

7. Briefly explain about Flow Control Mechanism in Data Link Layer. [14M]

**UNIT-3**

1. a) Write in detail on Time–Division Multiplexing and Frequency- Division Multiplexing.

b) Explain the Code Division Multiple Access.

1. a) Briefly discuss the different Channelization techniques. [7M]

b) What is CSMA? Explain about CSMA/CA?[7M]

3. a)What is CSMA? Explain about CSMA/CD. [7M]

b) Explain the various ALOHA protocols in details.[7M]

4. Write and explain about various multiple access protocols.[14M]