

Roll No. \_\_\_\_\_

**PGIIS-N 1549 B-2K13**

**M.Sc. IIIrd Semester (CBCS) Degree Examination**

**Computer Science**

**(Data Communications and Computer Networks)**

**Paper -HCT - 3.2**

**(New)**

Time : 3 Hours

Maximum Marks :80

- Instructions:** 1) Q. No 1 in Section A is compulsory.  
2) Answer any five questions from Section B.

**Section-A**

1. Answer the following: (10×2=20)
- What is a Computer network?
  - Define flow control.
  - State fiber optic cable losses.
  - Mention the types of errors.
  - What are CRC generator and checker?
  - What are the features provided by layering?
  - How can the routing be classified?
  - Define bit stuffing.
  - What are the two main categories of DNS messages?
  - How is HTTP similar to SMTP?

**Section-B**

- Discuss the OSI-ISO layered model. Discuss the functionalities of each layer. (6)
  - Describe the line coding process used for converting digital data to digital signals. (6)
- What is hamming distance? Explain simple parity check code C(5,4) with d min=1. How many bits can be corrected? (6)

- b) Describe HDLC. (6)
- 4. a) Explain 802.3 MAC frame format and frame length. (6)
- b) Compare Ffow-based routing with Distance Vector Routing. (6)
- 5. a) What is the difference between open loop congestion control and closed loop congestion control? (6)
- b) Explain different multiplexing techniques. (6)
- 6. a) Explain the three way handshake protocol to establish the transport level connection. (6)
- b) What kind of file types can FTP transfer? What are the three FTP transmission modes? Explain. (6)
- 7. a) What are the two categories of encryption/decryption methods? What is the main difference between the categories? (6)
- b) Write short note on symmetric-key cryptography. (6)
- 8. Write notes any two of the following: (6+6)
- a) RS 232 Interfacing sequences.
- b) IEEE 802.11
- c) Routers
- d) W W W