Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐ Total No. of Pages : 02

Total No. of Questions : 08

Ph.D in Faculty of Applied Science (Computer Application) /

Ph.D in Faculty of Engineering (CSE/ECE)

ADVANCE DATA COMMUNICATION

M.Code : 77353

Time : 3 Hrs. Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carry TWENTY marks.

1. a) Explain the following terms :

i) Information Capacity bits

ii) Baud rate

iii) Band width

iv) Carrier recovery

v) Clock recovery

b) Explain :

i) FSK

ii) ASK

iii) PSK

2. a) What are the various types of topologies? What are the relative merits and demerits of these topologies?

b) What are the interfaces and modems used in data communication?

3. a) Discriminate between the send and receive windows for link and how are they related with (a) a selective repeat retransmission scheme (b) a Go back- N control scheme.

b) Describe various error detection and correction techniques. The generator polynomial is $x^3 + x + 1$. A sender wants to send data 1001. Generate CRC code. Also describe error checking process if 3rd bit is inverted from left.

4. a) Compare time and space division switches.

    b) Distinguish between Circuit and virtual circuit connection.

5. a) Explain Link access Protocols.

    b) Explain various transmission modes and compare them.

6. a) What are the protocols and standards? Explain.

    b) Compare TDM and STDM

7. a) What are the categories of networks? Explain.

    b) Explain CSMA/CD in detail.

8. a) Explain EIA RS-232 standard in detail.

    b) Explain point-to-point and multi-point line configurations.