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# FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, NOVEMBER 2013

## IT/CS 09 505—DIGITAL DATA COMMUNICATION

Time : Three Hours                                            Maximum : 70 Marks

### Part A

*Answer **all** questions.*

1. Differentiate Synchronous and Asynchronous transmission.
2. What kind of arithmetic is used to add data items in checksum calculation ?
3. What are intra-LATA and inter-LATA services ?
4. Compare HDLC and PPP.
5. What do you mean by error control ?

(5 × 2 = 10 marks)

### Part B

*Answer any **four** questions.*

1. Explain about transmission impairment.
2. Discuss about the constellation diagram.
3. Explain about the cross bar switch with its diagram.
4. Brief about the working of the Data Link Layer.
5. Explain any *one* protocol used for the noiseless channels.

(4 × 5 = 20 marks)

### Part C

1. Describe the various multiplexing techniques in detail.

*Or*

2. Explain in detail about the transmission media.

3. Discuss about the various analog to digital techniques in detail.

*Or*

4. Explain the various digital to analog techniques in detail.

5. Explain about the circuit-switched networks in detail.

*Or*

6. Discuss about the Digital Subscriber Line technologies in detail.

7. Explain about the protocols used for noisy channels.

*Or*

8. With a neat sketch, explain the working of HDLC Protocol.

(4 × 10 = 40 marks)