Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
A Constituent Institution of Manipal University

SEVENTH SEMESTER B.Tech. (E & C) DEGREE END SEMESTER EXAMINATION - NOV 2017
SUBJECT: DATA COMMUNICATION AND NETWORKING (ECE - 433)

TIME: 3 HOURS **MAX. MARKS: 50**

Instructions to candidates
- Answer **ANY FIVE** full questions.
- Missing data may be suitably assumed.

1A. What is Cyclic Code What are the properties of Cyclic Code? If the received code word is 110011111 and generator polynomial 1101. Find out whether error is there or not?
1B. Write neatly block diagram of FHSS and DSSS and explain each block.
1C. Explain ATM cell and its various fields.

(5+3+2)

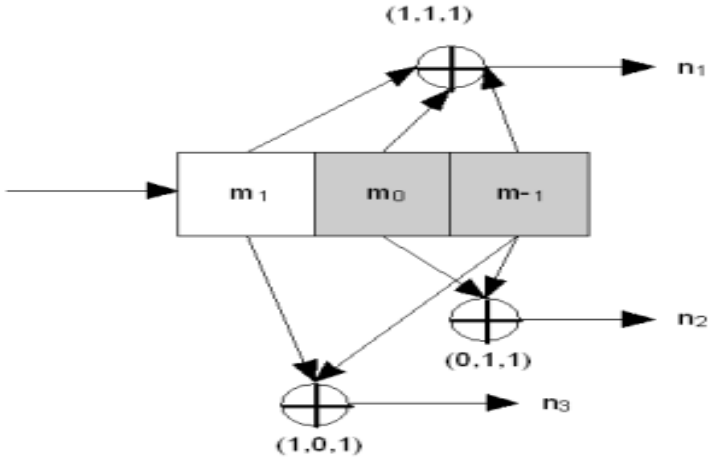
2A. What are the adaptation layers in ATM? Explain each adaptation layer with the service category it is adapting.
2B. Explain E1/T1 carrier in detail.
2C. Explain Trellis coded Modulation.

(5+3+2)

3A. Explain protocol architecture used in ISDN with a neat diagram.
3B. Explain how a composite signal is made in CDMA and it is demodulated.
3C. Explain maximum likely hood detection with an example.

(5+3+2)

4A. Consider a Convolution Coder



a) Write the state diagram for the above
b) If the received sequence is 111010 010 show the survival path.

4B. Explain different types of traffic categories in ATM.

4C. What is maximum length sequence? Explain.

(5+3+2)

5A. Explain what is VC and VP in ATM and how routing is done in ATM?

5B. Compare circuit switching, packet switching and message switching.

5C. How many bits of hamming code is required to detect three errors and correct one error?

(5+3+2)

6A. What is Broadband ISDN? Explain the applications of Broadband ISDN in detail.

6B. What is Hamming distance? What is the relation between hamming distance and error correction?

6C. Explain LDPC code and where it is used.

(5+3+2)