

- (i) Find the generator and parity check matrix for systematic Code .
- (ii) Find the code word that begins with 110.
- (iii) If the received code sequence is 101101, determine The message word which was transmitted. [4+3+3]

Or

- (a) A rate 1/3 convolutional coder with constraint length of '3' uses the generating vectors

$$X_1 = (100), X_2 = (101) \text{ and } X_3 = (111)$$

- (i) Draw the encoder configuration and prepare the logic table.
- (ii) Draw the state diagram for the coder. [10+6]

Unit - V