

(2)

- (C) Design a combinational logic circuit using a ROM. The circuit accepts 3 bit binary number & generates 3-bit Gray Code.
- (B) What is READ & WRITE operation?
- (A) With neat diagram explain the architecture of 32×4 Counter.
- (E) What is a Counter? Design a MOD-8 Synchronous Counter.
- (D) Attempt any TWO parts of the following.
 - (A) With neat diagram explain Universal Shift Register.
 - (B) Implement with logic gates, 2-bit Amplitude Comparator.
 - (C) Explain the operation of Master Slave JK Flip Flop. Why it is called Master Slave?

$$F_1 = A'C + AB'C$$

$$F_0 = AB + B'C$$

- (B) Implement logical function using PAL:-
Edge Triggered D-Flip Flop.
- (A) Differentiate between Latch and Flip Flop. Explain

(5x4)

- 3. Attempt any FOUR parts of the following.
 - (C) Simplify the following Boolean function using K-map method:-

$$Y(A,B,C,D,E) = \sum m(0,4,8,12,16,18,20,22) + \sum d(24,26,28,30,31)$$