

7. In Moore models, output is function of only CO4- R
- (a) Present state (b) Input state (c) Next state (d) Both (A) and (B)
8. The time sequence of inputs, outputs, and flip-flop states can be enumerated in a CO4- R
- (a) Transition table (b) Truth table (c) Characteristic table (d) None of these
9. Transistor–transistor logic (TTL) is a class of digital circuits built from CO5- R
- (a) JFET (b) Resistors
- (c) Bipolar Junction Transistors (d) Bipolar Junction Transistors and Resistors
10. The storage element for a static RAM is the _____ CO5-R
- (a) Diode (b) Resistor (c) Capacitor (d) Flip Flop

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Simplify the following Boolean function CO1- App (8)
 $f(W, X, Y, Z) = \sum m(2, 6, 8, 9, 10, 11, 14, 15)$ using Quine-McClukey tabular method.
12. Design a 4 bit magnitude comparator and draw its logic diagram. CO2- App (8)
13. Draw the logic diagram of a 4-bit universal shift register and explain its operation. CO3- U (8)
14. Design a sequence detector that produces an output '1' whenever the non-overlapping sequence 1011 is detected. CO4- U (8)
15. Implement the following two Boolean functions with a programmable logic array (PLA) CO5- U (8)
- $F_1(A, B, C) = \sum m(0, 1, 3, 4)$
- $F_2(A, B, C) = \sum m(1, 2, 3, 4, 5)$