MAY 2017 **ID 6603/GSA**

Time : Three hours Maximum : 75 marks

PART A — (5 × 6 = 30 marks)

Answer any FIVE questions.

1. Convert the decimal number 1234.5625 into its binary and hexadecimal equivalents.

2. Write down the Mc-Clausky tabulation method three steps.

3. Draw the gate circuit of RS flip flop and obtain its truth table

4. State the function of a shift register.

5. Discuss in detail about the Encoder.

6. Explain about design of accumulator.

7. Discuss in detail about designing circuit using PLA. Circuit.

8. Convert into 1's and 2's complement for the following :

   (a) 11001

   (b) 111000

   (c) 101010

PART B — (3 × 15 = 45 marks)

Answer any THREE questions.

9. What are universal gates? Why are they so called? How is a digital circuit designed using universal gates? What are the advantages and disadvantages of such a design?

10. Draw a ripple counter circuit and explain its operation.

11. Explain the operation of the Clocked R-S. flip flop with a diagram and truth table.

12. Explain in detail about design of counter.

13. Design a circuit to convert a four bit BCD code into a four bit Gray code using a single ROM.

———————