**B.Sc. DEGREE EXAMINATION, APRIL 2016.**

**I YEAR — I SEMESTER**

**Major Paper I — DIGITAL LOGIC FUNDAMENTALS**

**Time : 3 hours Max. Marks : 60**

**SECTION A — (10 × 1 = 10 marks)**

**Answer any *TEN* questions.**

1. List out the Universal Gates.
2. What do you mean by weighted code?
3. What is PLA?
4. Define DeMultiplexer.
5. List out the various number system.
6. Define flip flop.
7. What is Buffer?
8. What is bit?
9. List out the types of RAMs
10. Define counter
11. Differentiate between sequential circuit and combinational circuit.
12. What is the use of primary memory?

**SECTION B — (5 × 4 = 20 marks)**

**Answer any *FIVE* questions.**

1. Solve the following binary into its equivalent octal and Hexadecimal.
   1. (l0101111)2 and
   2. (110111100111)2.
2. Write short notes on: Sum of Products form.
3. Discuss in details about Multiplexer with neat block diagram.
4. Explain the functions of JK flip flop in detail.
5. Explain shift register using suitable logic diagram.
6. Differentiate between RAM and ROM.
7. Differentiate between Decoders and Encoders.

**SECTION C — (3 × 10 = 30 marks)**

**Answer any *THREE* questions.**

1. Construct OR, AND, NOT Gates using NOR gates.
2. Describe in detail the full adder circuit.
3. Explain about Parity Generators with example.
4. Explain the operation of clocked RS flip-flop.
5. What are asynchronous counters? Explain the operation of an asynchronous counter with a neat diagram.

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