SECTION - A

1. Answer any 8 questions. Each question carries 3 marks. (3×8=24)

1) Define universal gate with example.

2) What is multiplexer? Explain the operation.

3) Define ROM and its types.

4) Expand the following:
   i) ASCII ii) EBCDIC iii) BCD.

5) What is an accumulator? Explain with example.

6) Explain the instructions ION, IOF and STA.

7) Explain control word format.

8) What is meant by reverse Polish notation?

9) Explain interrupts and its types with example.

10) Explain hit ratio with example.
SECTION – B

II. Answer **any four** full questions. **Each** full question carries 14 marks. (14x4=56)

11) a) What is meant by flip-flop? Explain its type with example. 7

b) Explain half adder and full adder circuit with example. 7

12) a) Explain IC's and its types with example. 6

b) Explain about 4-bit registers with logic diagram. 6

c) Explain the advantages of registers. 2

13) a) Explain about 2's complement subtraction method with example. 7

b) Explain about number representation with example. 7

14) a) Explain the basic computer design with flow-chart. 10

b) Explain about input / output configuration. 4

15) a) Explain about addressing modes and its types. 7

b) Explain the types of computer instructions with reference to the fixed operand. 7

16) a) Illustrate the concept of cache memory with mapping procedure. 7

b) Explain the concept of page table in virtual memory. 7