



Date: 31-10-2018

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

**Section – A**

Answer **ALL** the Questions

**(10 \* 2 = 20 Marks)**

- 1) Draw the truth table and logic symbol for Ex-OR gate.
- 2) Draw the truth table for Half Adder.
- 3) Define Encoder.
- 4) What do you mean by Counter?
- 5) What is called Accumulator?
- 6) What is called Program Counter?
- 7) What is the use of Interrupt enable flipflop??
- 8) List the phases of Instruction Cycle.
- 9) What is called control word?
- 10) What are the fields that are found in Instruction formats?

**Section – B**

Answer **ALL** the questions

**(5 \* 8 = 40 Marks)**

- 11) i) Simplify the following Boolean function using Karnaugh map

$$F(A,B,C,D) = \sum(3,7,11,13,14,15)$$

**(OR)**

- ii) Describe in detail about Dflip flop

- 12) i) Discuss in detail about the decoder with their logic diagram and its truth table.

**(OR)**

- ii) What is Shift Register? Explain about bidirectional shift register with parallel load.

13) i) Explain in detail about the computer Instruction Formats.

**(OR)**

ii) Discuss about how Direct and Indirect address is referred in memory

14) i) Explain the Memory Reference instructions

**(OR)**

ii) Explain in detail about the Input-Output configuration and their instructions.

15) i) Explain in detail about the different types of address instructions with an example.

**(OR)**

ii) With a neat diagram, explain in detail about the status bit registers.

### **Section - C**

Answer any **TWO** questions

**(2 \* 20 = 40 Marks)**

16) i) Explain in detail about the Full adder with a neat diagram. **(10 Marks)**

ii) Explain SR and JK flip-flops **(10 Marks)**

17) i) Discuss in detail about the Multiplexer with a neat diagram **(10 Marks)**

ii) With a neat diagram, explain about the different phases of Instruction cycle.

**(10 Marks)**

18) Explain in detail about the Addressing modes with an example.

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