S.B. Roll No……

DIGITAL ELECTRONIC AND MICROPROCESSORS
5th/Elect./2529/Nov'15

Duration: 3hrs. **M.Marks=75**

SECTION-A

Q 1. Fill in the blanks: **10x1.5=15**

(i) RAM stands for……..
(ii) X+X=……
(iii) The …… language uses strings of 0's and 1's.
(iv) 2' s complement of 11101 is …….
(v) If both inputs of XOR gate are high, the output is…….
(vi) The Boolean expression (A+C') (B'+C') simplifies to …….
(vii) A half adder consists of ….. gate and ….gate
(viii) Flip flop is a ……. Circuit.
(ix) A typical value of conversion time for A/D converter may be about…….
(x) A program written in mnemonics is called…… program.

SECTION-B

Q 2. Attempt any SIX questions: **5x6=30**

(i) What do you mean by interrupts? Discuss various hardware interrupts of 8085.
(ii) **(a)** Perform BCD addition
01100111 and 01010011
(b) Differentiate b/w combinational and sequential circuits.
(iii) Explain universal property of NAND gate.
(iv) Discuss De Morgan's theorems with suitable examples.
(v) Write short notes on various display devices.
(vi) Discuss various types of shift registers.
(vii) How race around condition can be eliminated in JK flip flop?
(viii) Explain how semiconductor memories are classified on the basis of their working?

SECTION-C

Attempt any THREE questions: **3x10=30**

Q3. **(a)** Explain Pin diagram of 8085.
(b) What are the various addressing modes of 8085?
(c) Instruction set of 8085

Q4. What do you mean by D/A converter? Explain Successive Approximation A/D converter.

Q5. **(a)** What is full adder? Explain with truth table and circuit diagram.
(b) With neat diagram, explain octal to binary encoder.

Q6. **(a)** Draw logic symbol of SR flip flop and explain its working..
(b) Design 4 bit Ring counter.

Q7. **(a)** Explain DMA scheme with flow chart.
(b) By giving suitable examples, explain binary subtraction using 2's complement method.