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SVS 323 B - 14

B.Sc. Vth Semester Degree Examination
Electronics
(Digital Electronics and Microprocessor)
Paper - 5.2

Time : 3 Hours   Maximum Marks : 80

Instructions to Candidates:

  i)   Answer *all* questions from Section - A
  ii)   Answer any *five* questions from Section - B
  iii) Answer any *four* questions from Section - C

Section - A

1. Choose the correct answer   (5×1=5)
   (i)   Four control signals in a multiplexer can select
         a) 8 input lines   b) 16 input lines
         c) 8 output lines   d) 16 output lines
   (ii) An 8-bit µp signifies that it has
         a) an 8-bit address bus   b) an 8-bit control bus
         c) an 8-bit internal line   d) an 8-bit data bus
   (iii) The instruction MOV A, B belongs to
         a) Immediate addressing   b) Direct addressing
         c) Implied addressing   d) Register addressing
   (iv) Which of the following interrupts of 8085 has highest priority 1
         a) TRAP   b) INTR
         c) RST 6.5   d) RST 2.5
   (v)   Which of the data transfer is not possible in a µp?
         a) Memory to accumulator   b) Accumulator to memory
         c) Memory to memory   d) I/O device to accumulator

2. Fill in the blanks   (1×5=5)
   (i)   A————————is a logic circuit that accepts one data input and distributes it over several outputs
   (ii) The resolution of————————bit D/A converter is approximately 0.4 percent
   (iii) An EPROM is a ————————access memory
   (iv) NOP instruction of 8085 µp performs ————————operations
   (v)   Stack resides in ————————

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3. State whether the following statements are True or False   **(1×5=5)**
   i) Dynamic RAM needs refreshing circuit.
   ii) Op-amp is used in both A/D and D/A converters
   iii) The clock frequency of 8085 microprocessor is 6.14 MHz
   iv) The total number of status flags in 8085 microprocessor in eight.
   v) A three byte Instruction requires only one fetch cycle for its execution

Section - B

Answer any **five** questions   **(5×5=25)**

4. With a neat diagram explain the working of 1 to 4 demultiplexer

5. With a neat diagram explain the EPROM

6. What are timing and operation status?
Explain with neat timing diagram the operation fetch

7. What is stack? Explain PUSH and POP operation

8. How many general purpose registers are present in 8085 microprocessor?
Explain the functions of Accumulator and program counter

9. Write an assembly language program to find logical AND ing of two 8-bit numbers

10. Explain the instructions XCHG and XTHL

Section - C

Answer any **four** questions   **(4×10=40)**

11. With a neat diagram explain the working of R-2R ladder method of digital to analog converter

12. With a neat diagram explain static RAM

13. Draw the block diagram of 8-bit 8085 μp and explain operation of each block

14. Explain the addressing modes of 8085 μp

15. With a neat diagram explain the working of 8255 parallel peripheral interface

16. Write short note on   **(5+5)**
   a) Subroutines
   b) USART-8251