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SVS 323 B-17

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

Time : 3 Hours   Maximum Marks : 80

Instructions to Candidates:

1) Answer all questions in Section-A

2) Answer any five questions from section-B

3) Answer any four questions from Section-C

Section - A

1. Choose the correct answer   (5×1=5)

   i) A digital multiplexer is also called as

       a) Data selector   b) Data manager

       c) Data distributer   d) None.

   ii) A read/Write memory is also known as

       a) ROM   b) RAM

       c) PROM   d) EPROM

   iii) In intel 8085 μp. the address bus is of _____ bit wide.

       a) 4   b) 8

       c) 16   d) 32

   iv) Which of the following interrupts of 8085 μp has highest priority.

       a) RST 5.5   b) RST 6.5

       c) INTR   d) TRAP

   v) IC 8251 is _____

       a) DMA controller   b) USART

       c) PPI   d) PIT.

2. Fill in the Blanks   (5×1=5)

   i) The resolution of ____ bit D/A converter is approximately 0.4 percent.

   ii) A Dynamic RAM must be _____ periodically.

   iii) 8085 μp has _____ number of opcodes

   iv) When DI instruction of 8085 μp is executed _____ are disabled.

   v) DMA stands for _____

3. State whether the following statement are true or false   (5×1=5)

   i) Accuracy is a comparison of the actual O/P of D/A with the expected O/P.

   ii) ROM is a volatile memory.

   iii) In 8085 μp one of the operand must be in Accumulator.

   iv) CALL & RETURN instructions are used with stack.

   v) A Programmable peripheral interface is a single port device.

Section-B

Answer any **five** of the following   (5×5=25)

4. What is demultiplexer? Explain 1:4 demultiplexer.

5. In brief give an idea of primary and secondary memories with examples.

6. Write a short note on Instruction cycle.

7. Write an ALP to transfer the contents of memory location 8051 H to Accumulator and than to register D, E and H.

8. Explain in brief Instruction format with suitable examples.

9. What is stack? Explain PUSH and POP operations.

10. Draw the pin diagram of 8253 programmable Interval Timer (P&T).

Section-C

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

11. Explain A/D converter by dual slope Integrating method.

12. Explain the operation of ROM diode array matrix with diagram.

13. Draw the functional block diagram and explain the Architecture of 8085 μp

14. Write an ALP to

   1)   Add two 8-bit numbers

   2)   Find 2's complement of 8-bit number.

15. Draw the Architecture of 8255 general purpose peripheral interface, explain the operation of each block.

16. Write a short note on

   a)   Binary weighted D/A converter

   b)   PROM.