P-119

Total Pages : 3   Roll No. ....

MPHY-606

Memory Devices and 8085 Microprocessor

M.Sc. Physics (MSCPHY)

4 Semester Examination, 2023 (June)

Time : 2 Hours]   **[Max. Marks : 35**

Note : This paper is of Thirty Five (35) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

SECTION–A
(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only.

(2×9½=19)

1. Discuss PMOS, NMOS and CMOS logic. Explain the operation of CMOS inverter with the help of diagram.

P-119 / MPHY-606   **[P.T.O.**

2. Discuss the function of memory in a computer system? Explain the method of increasing word length of a memory system using a block diagram.

3. Explain Intel 8085 microprocessor with the help of functional block diagram..

4. Discuss difference between assembly language, machine language arid high level language. Write an assembly language program to find the largest number in an array of 8 bit numbers.

5. Write a short note on any *two* of the following :

(a) Integrated injection logic.

(b) Memory architecture.

(c) Interrupts of 8085 microprocessors.

(d) Addressing modes of 8085 microprocessor.

SECTION–B
(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only.   (4×4=16)

1. Explain the term fan in, fan out, propagation delay and noise margins of digital circuit.

2. What is Tri-state logic ? Explain.

3. What do you mean by RAM and ROM? Compare their characteristics.

4. Explain memory organization of 8155 RAM with a block diagram.

5. What are the various registers of 8085 microprocessor? Explain.

6. Discuss the Instruction cycle, Machine cycle and T state.

7. Write an assembly language program to find the sum of two 8 bit numbers.

8. Discuss various types of data formats for 8085 instructions with suitable example of each.

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