P-120

MPHY-607

Advance Microprocessor

M.Sc. Physics (MSCPHY)

4th 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.

$$(2 \times 9\tfrac{1}{2} = 19)$$

1. Discuss the architecture of 8086 Microprocessor and describe logical signals in minimum mode.

2. What is interrupt process in a microprocessor? Make a block diagram of 8259 interrupt controller and discuss its operations.

3. Write a note on Intel Pentium processor. What are Intel-Pentium Pro-Microprocessor.

4. Explain working of RISC and CISC processors.

5. Explain the various modes of operations of 8255 A and explain its working in BSR mode.

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. Differentiate between minimum and maximum mode of control signals in 8086 microprocessor.

2. Define the types of microprocessor operation according to their word size in brief.

3. Discuss 8086 microprocessor with demultiplexed address bus and generating control signals in minimum mode.

4. Draw the pin diagram of 80386 Microprocessor.

5. Discuss the programming model of 80286 Microprocessor in brief.

6. Discuss the requirement of 8259 interrupt controller.

7. What do you mean by the instruction set and how is it used in Intel 8086 microprocessor.

8. Explain the different Input/output operations used for microprocessor in brief.

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