K-427

MPHY-607

ADVANCE MICROPROCESSOR

M.Sc. Physics (MSCPHY)

4th Semester Examination, 2023 (Dec.)

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 answers 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.

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

1. Define Programmable Peripheral Interface and explain the working of 8255 Peripheral Interface to support the microprocessor.

2. Define the instruction set of microprocessor. Explain the various instruction set of 8086 microprocessor.

3. Write the short notes on following :

   (a) Programmable interval Timer.

   (b) Data Transfer Schemes.

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

5. Explain the architecture of 80386 microprocessor with its suitable pin diagram.

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. Draw the pin diagram of 80286 microprocessor.

2. What do you mean by the addressing modes and how is it used in microprocessor?

3. Define the RISC and CISC processors.

4. Write the short note on Pentium Microprocessors.

5. Differentiate between Memory Mapped I/O And I/O Mapped I/O?

6. Discuss about Burst and Cycle Stealing Mode of operations.

7. Explain the programmable registers used in microprocessor.

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

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