C124

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PHY-553

Memory Devices and Microprocessors

M.Sc. Physics (MSCPHY)

2nd Year Examination, 2022 (June)

Time : 2 Hours] **Max. Marks : 80**

Note : This paper is of Eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION–A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Twenty (20) marks each. Learners are required to answer any Two (02) questions only.

(2×20=40)

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

2. What do you understand by advanced microprocessor? Give some examples? Discuss in detail Pentium microprocessor.

3. Explain interrupt control. Draw and explain the interrupt control circuit for 8085 microprocessor.

4. Discuss in detail Addressing Modes and Instruction set of Intel 8086 Micro Processor.

5. Explain in detail the following :

(a) TTL(Transistor transistor logic).

(b) RTL(Resistor transistor logic).

(c) IIL(lntegrated injection logic).

(d) DCTL(Direct coupled transistor logic).

(e) HTL(High threshold logic).

SECTION–B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only. (4×10=40)

1. Draw pin diagram of Intel 8085.

2. Write short note on :

(a) ECL.

(b) PMOs.

3. What do you understand by timing diagram of 8085?

4. Explain working of CMOS.

5. How will you classify memory of computer system's?

6. What do you understand by Addressing modes and instruction set of Intel 8085?

7. Draw and explain the interrupt control circuit for 8085 microprocessor.

8. Describe how the interfacing of 8259A with 8085A microprocessor is done.