

A-890

Total Pages : 3

Roll No.

PHY-553

M.Sc. PHYSICS (MSCPHY)

(Memory Devices and Microprocessors)

2nd Year Examination, 2024 (June)

Time : 2:00 Hrs.

Max. Marks : 70

Note :- This paper is of Seventy (70) 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 2×19=38

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

A-890/PHY-553

(1)

P.T.O.

1. What do you understand by Computer Memory ?
Explain in detail the various categories of Computer Memory.
2. (a) Discuss subroutines and the stack in 8085 Microprocessor.
(b) Discuss various types of addressing modes in a microprocessor.
3. (a) Make the block diagram of 8253 interval timer and discuss its functioning.
(b) How can a microprocessor function as a CPU ?
Explain with proper block diagram.
4. (a) Explain the architecture of 8086 microprocessor.
(b) Compare various logic families and discuss which one is the best.
5. How a MOSFET can be used as a switch ? Provide a detailed explanation.

Section–B

Short Answer Type Questions 4×8=32

Note :- Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. Discuss high level language. Differentiate between compiler and interpreter.
2. Discuss the advantages of RISC processor over CISC processor.
3. Describe ROM, PROM, EPROM and their characteristics.
4. Discuss Emitter coupled logic.
5. Explain the necessity of the 8259 interrupt controller.
6. Discuss the Intel Pentium Processor and explain the concept of a 'pro processor.'
7. What is microprocessor ? Explain its working in brief.
8. What do you mean by timing graphs ? Make a timing diagram of memory read instruction.
