



K15P 0095

Reg. No. : .....

Name : .....

**Third Semester M.A./M.Sc./M.Com. Degree (Reg./Sup./Imp.)**  
**Examination, November 2015**  
**PHYSICS (2014 Admn.)**  
**PHY 3E03 : Microprocessors and Applications**

Time : 3 Hours

Max. Marks : 60

**SECTION – A**

Answer both questions (either a or b) :

1. a) Explain the classification of 8085 instruction in various groups.  
OR  
b) Give the architecture and operating modes of programmable peripheral interface 8255.
2. a) Give an account of interrupt and its need. Explain the different types of interrupts in 8085 microprocessor.  
OR  
b) With the help of a block diagram, explain the microprocessor based system for temperature measurement and control. **(2×12=24)**

**SECTION – B**

(1 mark for Part (a), 3 marks for Part (b), 5 marks for Part (c))

(Answer any four)

3. a) List various machine cycles of Intel 8085.  
b) Discuss the various types of addressing modes of intel 8085 with suitable examples.  
c) Write a program to add two 8-bit numbers 49H and 56H.
4. a) What is meant by volatile and non-volatile memory ?  
b) What is memory access time ?  
c) Compare the memory mapped I/O and standard I/O mapped I/O scheme.

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5. a) What is polling ?  
b) Distinguish between hardware and software interrupt. List the software and hardware interrupts.  
c) How to check whether an 8085 interrupt is masked or not ?
6. a) What is handshake port ?  
b) Give an account of USART.  
c) Draw the schematic diagram of intel 8253. What are its various operating modes.
7. a) What is a programmable interrupt controller ?  
b) Write a short note on Intel 8231.  
c) With the help of functional block diagram, explain the operation of Intel 8279.
8. a) What is delay subroutine ?  
b) What is stepper motor ? Discuss its applications.  
c) Show the interface connections for a microprocessor-based scheme for traffic control. (9×4=36)