



M 26102

Reg. No. : .....

Name : .....

**Third Semester M.A./M.Sc./M.Com. Degree (Reg./Sup./Imp.)  
Examination, November 2014**

**PHYSICS**

**(2009 Admn. Onwards)**

**PH 304 B (ii) : Microprocessors**

Time : 3 Hours

Max. Marks : 50

**SECTION – A**

Answer **any two** questions. **Each** question carries **10** marks.

1. Explain the bus timing in fetching an instruction from memory.
2. Explain enabling, disabling and masking of interrupts. Discuss with suitable examples how transfer data using interrupts.
3. Discuss the main features of ADC 0800. Explain how will you obtain clock signal for an A/D converter.
4. Explain the functions of a logic analyzer as a troubleshooting instrument.

**SECTION – B**

Answer **any five** questions. **Each** question carries **3** marks.

5. Distinguish between a microcomputer from a general-purpose computer.
6. List the sequence of events that occurs when the 8085 MPU reads from memory.
7. Show that the memory addressing capacity of a CPU is given by  $2^n$ , where n is the number of address lines of the CPU.
8. What is interfacing ?

P.T.O.



9. Distinguish between instruction cycle and clock cycle.
10. Distinguish between machine language and assembly language.
11. Discuss how to determine the control word for 8255.
12. What are various operating modes of 8253 ?

### SECTION – C

Answer **any three** questions. **Each** question carries **5** marks.

13. If the clock frequency is 5 MHz, how much time is required to execute an instruction of 18 T states.
14. It is desired to clear the accumulator of 8085A. Write the possible instruction for this purpose.
15. Design a subroutines for the 8085 that multiplies two single-byte integers X and Y, and produces a 16 – bit product. X and Y need not be natural numbers.
16. Specify the crystal frequency required for an 8085 system to operate at 1.1 MHz.
17. With a block diagram explain the function of sample and hold circuit.