DD-286

M. Sc. EXAMINATION, Dec. 2018

(Fourth Semester)

(Re-appear Only)

PHYSICS

PHY612B

Microprocessor and Interfacing

Time : 3 *Hours*]   [*Maximum Marks :* 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Sketch and explain timing diagram for I/O read and memory write control signal. **12**

(b) Differentiate memory mapped I/O and I/O mapped I/O. **8**

2. (a) What are Interrupts ? Discuss all types of interrupt and calculate the vector address for hardware interrupt. **14**

(b) Discuss buffer registers and control bus. **6**

Unit II

3. Discuss architecture of 8086 microprocessor in detail with all functional units. **20**

4. Write short notes on the following :

(a) Procedure **7**

(b) Subroutine **7**

(c) Stacks. **6**

Unit III

5. Discuss memory management and block diagram of 80286 microprocessor. **20**

6. (a) Give a comparative analysis between 8085 and 8086. **10**

(b) Give a brief idea about 80386 advance microprocessor. **10**

Unit IV

7. What are Converters ? Explain any *two* types of each A/D and D/A converters. **20**

8. (a) Discuss data acquisition system and storage. **10**

(b) Explain microprocessor based water level indicator system. **10**