AE-755

M.Sc. (Final)
Term End Examination, 2016-17

PHYSICS

Special Paper

Group - A

Paper - IV

Electronics-II

Time : Three Hours] [*Maximum Marks* : 100
[*Minimum Pass Marks* : 36

Note : Answer any **five** questions. All questions carry equal marks.

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1. (*a*) What is a Memory ? Classify memories. Discuss their merits and demerits.

(*b*) Explain ROM and RAM.

2. (*a*) Discuss the history of development of Microprocessor. Why is it known as heart of CPU ?

(*b*) Explain the recent trends of development of microprocessor and single chip micro controller upto super computers.

3. Explain the internal architecture of Microprocessor Intel-8085, with the help of diagram, give the detail of Registers, ALU, Timing Control Unit.

4. Give in detail the various functions performed by Microprocessor. Hence explain
(*i*) Microprocessor-initiated operations
(*ii*) Internal operation
(*iii*) Peripherial initiated operations with examples.

5. With the help of pin-out diagram of Microprocessor Chip 8085, explain the following :
(*a*) Address and Data Bus
(*b*) Control and Status Signals
(*c*) Power supply and Clock frequency
(*d*) Interrupts and Serial I/O Ports

6. Write down the Instruction Sets of 8085. Explain the different addressing modes giving suitable examples.

7. Give the details of Instruction Groups for (*i*) Arithmetical group (*ii*) Branch group (*iii*) I/O Machine control group giving suitable examples.

8. Write an Assemble Language Program using flow-chart and instruction codes for the addition of two decimal numbers D_1 and D_2 and store the result in some memory location.

9. Describe giving experimental detail to use Microprocessor, Digital to Analog conversion using IC DAC 808.

10. Write short notes on the following :

(*a*) Microprocessor based Lift Control System

(*b*) Measurement of frequency, phase angle and power factor using Microprocessor

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