C 61952 (Pages : 2) Name.....

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2019

(CUCSS—PG)

Physics

PHY 4E 20—MICROPROCESSORS AND APPLICATIONS

(2012 Admissions)

Time : Three Hours Maximum : 36 Weightage

Section A

Answer **all** *questions.*
Each question carries 1 *weightage.*

1. What is the role of Instruction Register in 8085 processor ?
2. What are the different addressing modes in 8085 processor ?
3. Differentiate LDA and STA instructions in 8085 processor.
4. What is the role of READY signal in the timing and control circuit of 8085 processor ?
5. What are the hardware interrupts in 8085 processor ?
6. What is 8279 chip used for ?
7. How many ports are there in 8255 chip and name them ?
8. Where is DMA used in a system ?
9. What are the signals in 8085 used for serial communication and which specific instructions are used.
10. What is the fastest conversion technique in ADC and what is its disadvantage ?
11. What is the role of DAC in a ADC ?
12. What is the major difference of Microcontroller from a Microprocessor ?

(12 × 1 = 12 weightage)

Section B

Answer any **two** *questions.*
Each question carries 6 *weightage.*

13. With the help of internal block diagram explain the hardware interrupts and their significance in 8085.
14. With the help of internal block diagram explain the function of 8253 PTC chip.

Turn over

15. With the help of diagram explain the square wave generation using microprocessor.

16. With help of suitable diagram explain how 8051 microcontroller used in a control system.

(2 × 6 = 12 weightage)

Section C

Answer any **four** *questions.*

Each question carries 3 *weightage.*

17. Write an assembly level program for 8085 to sum up series of 16 bit data.

18. With the help timing diagram explain the Instruction fetch machine cycle in 8085 processor.

19. Explain how 8251 programmable communication is used for serial communication.

20. Explain how a 8259 is used to control the multiple interrupts in a processor.

21. Explain the DAC0800 circuit and its function.

22. Discuss the major features of 8051 microcontroller. (4 × 3 = 12 weightage)