

C 80728

(Pages : 2)

Name.....

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, MARCH 2020

(CUCSS)

Physics

PHY 4E 20—MICROPROCESSORS AND APPLICATIONS

(2017 Admission onwards)

Time : Three Hours

Maximum : 36 Weightage

Section A

Answer all questions

Each question carries weightage 1.

1. Draw the schematic of the timing and control unit of 8085 microprocessor.
2. Enlist different DMA schemes.
3. Enlist the programmable register of 8085 microprocessor.
4. What are the important features of the Shift instruction in microprocessor ?
5. Explain Memory mapped I/O scheme of 8085 microprocessor.
6. Explain a Sample and hold circuit.
7. Explain the concept of formation of a control word.
8. Explain features of 8279 DMA controller.
9. Explain the working of the 7448 driver.
10. With an example explain a programmable peripheral interface.
11. Explain the working of 8253 interface.
12. Explain the use of "POP" in 8051 microcontroller.

(12 × 1 = 12 weightage)

Section B

Answer any two questions.

Each question carries weightage 6.

13. With suitable examples explain the addressing modes and interrupts of 8085 microprocessor.
14. Explain the programmable communication interface of 8251 for serial data transfer.

Turn over

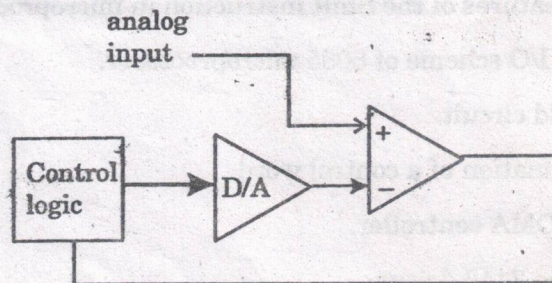
15. Explain the working of an ADC 0800 8-bit A/D converter.
16. With a block diagram explain the architecture of 8051 microcontroller and explain its salient features. Describe the various registers.

(2 × 6 = 12 weightage)

Section C

*Answer any four questions.
Each question carries weightage 3.*

17. Write an assembly level programme to find the largest number among numbers in an array starting at address 5000 and store it at the address 6000.
18. Find 2's compliment with carry of an 8 bit number stored at address 3050. Result is to be stored at address 8050 and 8051. Starting address of program is taken as 2000.
19. Explain machine cycle in a microprocessor.
20. Explain the working of the following circuit



21. For a three bit D/A convertor with range 0-5 V what would be the highest output voltage ?
22. What will be the counting rate and clock frequency input of a timer for the 8051 micro controller having a oscillator frequency of 1.3 MHz ?

(4 × 3 = 12 weightage)