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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MAY 2024

Fourth Semester

Vocational Course—MICROPROCESSOR AND INTERFACING DEVICES

(For the Vocational Subject : Applied Electronics of Model II—B.Sc. Physics)

[2013—2016 Admissions]

Time : Three Hours Maximum Marks : 60

Part A

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

Fill up the blanks :

1. Intel 8085 is an ———— bit NMOS microprocessor.
2. The address/data ———— transmits data and address at different moments.
3. An instruction is a ———— given to the computer to perform a specified operation on given data.
4. The language in which a programmer writes programs is called ———— language.
5. The IN instruction is used to ———— the data of an input device.
6. In DMA data ———— scheme CPU does not participate.
7. The TRAP is a ———— maskable interrupt.
8. The Intel 8255 is a programmable ———— interface.

(8 × 1 = 8)

Part B

Answer any **six** *questions.*
Each question carries 2 *marks.*

9. What are the various status flags provided in 8085 ?
10. Differentiate between Machine cycle and Instruction cycle.
11. Draw the timing diagram for fetch operation.
12. What are I/O ports ?
13. How instructions are classified ?
14. What is DMA data transfer scheme ?

Turn over

15. What is an interrupt ?
16. What are the different operating modes of 8255 ?
17. Why an interrupt controller is required ?
18. What is device polling ?

(6 × 2 = 12)

Part C

Answer any **four** *questions.*
Each question carries 4 *marks.*

19. List the various logical operations performed by ALU.
20. Bring out the difference between data and address bus.
21. Schematically represent the flow of instruction word in 8085.
22. Briefly explain asynchronous data transfer.
23. Write a note on programmable DMA controller.
24. Describe briefly the use of PPI Intel 8255.

(4 × 4 = 16)

Part D

Answer any **two** *questions.*
Each question carries 12 *marks.*

25. Describe the requirement of a program counter and stack pointer in the architecture of Intel 8085 microprocessor.
26. Discuss the various types of addressing modes of Intel 8085 with suitable examples.
27. Write programmes for arranging data in ascending and descending order.
28. Discuss on the programmable interrupt controller 8259.

(2 × 12 = 24)