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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2022

Fourth Semester

Vocational Course—MICROPROCESSOR AND INTERFACING DEVICES

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

(2013 to 2016 Admissions)

Time : Three Hours Maximum Marks : 60

Part A

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

Fill up the blanks :

1. The execution of the instruction ADD B will add the content of the register B to the content of the ————————.
2. The ———————— of an input/output port is duplicated on both A and AD buses.
3. The language in which a computer works is called a ———————— language.
4. DMA data transfer is faster as compared to ———————— data transfer scheme.
5. A microprocessor may have several interrupt levels and one ———————— device is to be connected to each interrupt level.
6. The Intel 8259 is a ———————— chip programmable interrupt controller.
7. The main functions of 8255 are to ———————— peripheral devices to the microcomputer.
8. Peripherals are connected to the microcomputer through electronic circuits known as ———————— circuits.

(8 × 1 = 8)

Part B

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

9. What is meant by three byte instruction ?
10. Explain memory read cycle.

Turn over

11. What operation is performed with LDA addr instruction ?

12. Draw the timing diagram for I/O write operation.

13. What are high level languages ?

14. What is a source program ?

15. State the merits of modular programming.

16. What is I/O mapped I/O scheme ?

17. Sketch interrupt driven data transfer.

18. What is a PIC ?

(6 × 2 = 12)

Part C

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

19. Give an account on RISC and CISC processors.

20. Explain the requirement of a program counter in the architecture of Intel 8085.

21. Write an assembly program to get 2's complement of a 16-bit number.

22. Give the details of the pins of Intel 8259.

23. What are programmable and non-programmable ports ? Explain.

24. Explain vectored interrupt mechanism.

(4 × 4 = 16)

Part D

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

25. Discuss various types of data formats for Intel 8085 instructions. Give examples for each type.

26. Bring out the architecture of Intel 8085.

27. Describe the classification of programmed data transfer schemes for 8085.

28. Discuss Intel 8257 as a programmable DMA controller.

(2 × 12 = 24)