44 (5) ASLP 5·4·1

2021

(Held in 2022)

MICROPROCESSOR AND ASSEMBLY LANGUAGE PROGRAMMING

Paper : 5·4·1

Full Marks : 50

Time : Two hours

The figures in the margin indicate full marks for the questions.

1. Choose the correct answer : 1×5=5

   (a) In each instruction cycle, the first operation is always

   (i) memory read

   (ii) opcode fetch

   (iii) memory write

   (iv) chip select

Contd.

(b) The address bus of 8085 is

(i) multidirectional

(ii) bidirectional

(iii) unidirectional

(iv) None of the above

(c) Each microprocessor recognize and processes a group of bits called

(i) byte

(ii) instruction

(iii) RAM

(iv) word

(d) Which of the following is a non-vectored interrupt ?

(i) RST 7·5

(ii) INTR

(iii) RST 1

(iv) TRAP

(e) Which of the following is an 8-bit register that is part of the ALU ?

(i) Stack pointer

(ii) Accumulator

(iii) Program counter

(iv) General purpose register

2. Answer the following questions : ***(any five)*** 2×5=10

(a) Mention *any two* data transfer instructions of 8085.

(b) List *any two* advantages of 8086 microprocessor over 8085 microprocessor.

(c) Distinguish between vectored and non-vectored interrupts.

(d) Mention *any two* instructions which clear the contents of accumulator.

(e) Distinguish between absolute and partial decoding.

(f) Why the number of output ports in the peripheral mapped I/O is restricted to 256 ports ? Explain.

3. Answer the following questions : ***(any six)*** 5×6=30

(a) What is microprocessor ? Explain various applications of microprocessor.

(b) Explain conditional CALL and RET instruction of 8085 microprocessor.

(c) Explain the classification of 8085 microprocessor instructions based on word size. Give example.

(d) What do you mean by hardware interrupts ? Bring out the differences between RST 7·5, RST 6·5 and RST 5·5.

(e) Describe the design of time delay using one register.

(f) Explain nesting of subroutine with an example.

(g) What is a decoder ? Explain how it works.

4. Write short note on : ***(any one)*** 5×1=5

(a) DMA controller

(b) Addressing modes and its types.
