2018

M.Sc. 4th Semester Examination

ELECTRONICS

PAPER—ELC-402

Subject Code—27

Full Marks : 50

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

(Microprocessor and its Applications)

Answer Q. No. *1* and any *three* from the rest.

1. (a) The memory address of the last location of an 8 K byte **memory chip is FFFFH. Find the starting address.**

(b) What does the instruction DAD H stand for ?

(c) Differentiate between memory-mapped I/O and I/O mapped I/O.

(d) What is Rs. 232 ?

(e) Differentiate microprocessor and microcontroller. 5×2

2. (a) Draw the functional block diagram of 8085 μP.

(b) What is machine cycle ? Explain the memory read machine cycle of 8085 μP. 5+(2+3)

3. (a) Write instruction to

(i) load OOH in the accumulator

(ii) decrement the accumulator

(iii) display the answer.

Specify the answer you would expect at the output port.

(b) In 8085 μP, let the following two instructions are carried out

L × 1 Sp, OOOH

PUSH D

with D = 09 H and E = FA H assumed.

Show the stack contents after PUSH operation.

(c) Enlist similarities and differences the instruction CALL and RET to the instructions PUSH and POP.

(2+1)+3+4

4. (a) Draw the functional block diagram of PIC 8259 and describe its response to interrupts.

(b) Explain the rotating priority modes of interrupt.

(3+3)+4

5. (a) Explain IEEE-488 interface standard. What is a current loop interface ?

(b) Draw and explain current loop tele type interface circuit.

(2+2)+(3+3)

6. (a) What do you mean by pipelined architecture ? How is it implimented in 8086 μP ?

(b) Compare between 8086 and 8088 μP s. (3+3)+4

[Internal Assessment — 10 Marks]