NEW

2015

BCA

3rd Semester Examination

MICROPROCESSOR

PAPER—2105

Full Marks : 70

Time : 3 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.

Answer *Question no. 1* and any *four* from the rest.

1. Answer any *five* questions : 5×2

(i) How many address lines are necessary to address 2MB of memory ?

(ii) What are the functions of program counter and stack pointer ?

(iii) What is tristate buffer?

(iv) What is carry and auxiliary carry flag?

(v) Illustrate SIM instruction.

(vi) List 16 bit registers in 8085.

(vii) What is the function of PUSH and POP instructions?

(viii) How many address lines are in 4096×8 EPROM Chip?

2. (a) Interface four 4K EPROM with 8085 and identify the memory address range of each EPROM Chip. Draw the schematic diagram.

(b) What is fold back memory?

(c) Can an input port and an and output port have the same port address? If yes, then how can we identify wheather this is an input port or output port?

10+2+3

3. (a) Explain memory mapped I/O and I/O mapped I/O.

(b) What is vector interrupt? Give example.

(c) What is RIM?

(d) Write a 31M instructions to enable RST 7·5 and disable other maskable interrupts. 4+3+4+4

4. (a) *Explain the architecture of 8085 microprocessor* along with function of each block and registers.

(b) Explain the addressing modes used in 8086.

10+5

5. (a) Write an assembly language program for 8085 to sort a set of 10 8 bit numbers stored from memory location XX70H. Store the result to XX80H.

(b) What is interrupt? Distinguish between markable and non-markable interrupt.

10+5

6. (a) Explain How 8237 DMA controller transfers 64K bytes of data per channel with eight address lines.

(b) Draw the block diagram at 8086 microprocessor.

8+7

7. (a) Write an assembly language program for 8085 to add 10 BCD numbers starting from memory location C400H and store the result in C500H and C501H.

(b) List the operating modes of the 8255A PPI and explain.

9+6
