(g) Give an application where microcontroller is preferred over a microprocessor.

(h) How to resolve conflicts on arrival of interrupts RST 7.5, RST 6.5 and RST 5.5.

(i) Which hardware devices in microprocessor 8086 allow a 2- stage pipeline ?

(j) What do you mean by assembler directive ? Write at least two assembler directives.

2. (a) Write a program in assembly language of 8085 to sort 10 numbers stored at memory location 2050H. 5

(b) Write a program in assembly language 8085 to obtain 25 microsecond delay. Compute the total space in bytes required for the above program in Q2 (a) 5

3. (a) Explain the difference between SRAM and DRAM. What are the merits and demerits of DRAM ? 5

(b) Interface a 8K × 8 ROM and 8K × 8 RAM to microprocessor 8085 so that the starting address of ROM in 0000H whereas the starting address of RAM is 8000H. Write the connection diagram and memory map assuming the IC of size 4K × 4 are available for both RAM and ROM. 5

4. (a) How many types of interrupts are available in 8085 ? Computer the vector address of each type of interrupt. How these interrupts are different from the interrupt of 8086 ? 5

(b) Explain the purpose of each bit position of operation command words of PIC 8259. 5

5. (a) Draw the schematic block diagram of microprocessor 8086. Explain the maximum mode signals. 5

(b) What is the role of 8288 bus controller ? Draw the block diagram of 8288 bus controller. 5

6. (a) What are the main characteristics of microcontroller 8051 ? Explain the difference between 8051 microcontroller and 8085 microprocessor. 5

(b) What is the need of multiplexing ? Discuss the advantages and disadvantages of multiplexing. 5

7. (a) Explain the interrupt structure of microcontroller 8051 with examples. 5

(b) Write the different regions of address space available in microcontroller 8051. 5