Scheme-G

Sample Test Paper- I

Course Name :- Diploma in Electronics Engineering Group

Course Code :- DE

17443

Semester :-Fourth

Subject Title :- Microprocessor

Marks :- 25 **Time:- 1 hour**

Instructions:

1. All questions are compulsory.
2. Illustrate your answers with neat sketches wherever necessary.
3. Figures to the right indicate full marks.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.

Q1. Attempt any THREE of the following. **(9 Marks)**

a. Write three features of 8085

b. Define Instruction cycle

c. Define algorithm and flowchart

d. Write the function of pins of 8085

a)Resetout b)ALE c)INTR

e. Define opcode and operand

Q2. Attempt any TWO of the following. **(8 Marks)**

a. Write assembly language program for 8 bit addition

b. Explain the function of ALU

c. Explain following instructions

a) CZ 2500 b) CPI 8bit data c) CMA

Q3. Attempt any two of the following. **(8 Marks)**

a. Write assembly language program for generating delay

b. Explain timing diagram for ADD B

c. Explain function of register pair

.

Scheme-G

Sample Test Paper- II

Course Name :- Diploma in Electronics Engineering Group

Course Code :- DE

17443

Semester :-Fourth

Subject Title :- Microprocessor

Marks :- 25 **Time:- 1 hour**

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q.1 Attempt any THREE **(9 Marks)**

a. List the interrupts of 8085

b. State the functionality of following IC in minimum system configuration 8155,8355 and 8085

c. List the operating modes of 8155 for timer section

d. What do you meant by BSR mode of 8255. Which port is used for BSR?

e. State the function of SOD and SID pins of 8085

Q.2 Attempt any TWO **(8 Marks)**

a. Write the control word for 8255 to configure in mode 0 for Port A as output ,Port B as input and Port C as output.

b. What are the various schemes used for data transfer between microprocessor and I/O devices.

c. Explain the functions of DDR_A and DDR_B register in 8355.

Q.3 Attempt any TWO **(8 Marks)**

a. Draw the block diagram of 8355.

b. The following memory device is to be interfaced to 8085.
2K EPROM address should start to location 0000h. Draw the complete interface.

c. Write the program to rotate the stepper motor by 180 degree in clock wise direction. Assume Port A is used to drive the motor and 1.8 degree is the step angle.

Scheme-G

Sample Question Paper

Course Name :- Diploma in Electronics Engineering Group

Course Code :- DE

Semester :- Fourth

17443

Subject Title :- Microprocessor

Marks :- 100 **Time:- 3 hour.**

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q1 A. Attempt any SIX **(12 Marks)**

a. State the memory addressing capacity of 8085.

b. Classify the buses of 8085.

c. Define the machine cycle.

d. Which type of memory available in 8155, also state its capacity?

e. State the function of stack.

f. How the port C is divided in Group A and Group B of 8255

g. Classify the data transfer techniques.

h. Find the errors in following instructions and rewrite the instruction

1) XCHG B 2) STA FFH

Q1 B. Attempt any TWO **(08 Marks)**

a. Differentiate I/O mapped I/O and memory mapped I/O.

b. Write the initialization instruction for 8255 in mode '0' to configure Port A as a input and port B as a output. Write instructions to read the content of Port A and display it on Port B.

c. Interface 8255 to 8085 in I/O mapped I/O. Write the addresses of 8255.

Q2. Attempt any FOUR **(16 Marks)**

a. State any four features of 8085.

b. With example describe any four addressing modes of 8085.

c. Draw the timing diagram for instruction MVI A, 55H and explain.

d. Write the delay subroutine using one 8 bit register only. Calculate the delay generated using same. Assume the suitable count in register.

e. Interface 8K RAM to 8085. State the memory map.

f. Describe the BSR mode of 8255.

Q3. Attempt any FOUR **(16 Marks)**

a. How address and data are demultiplexed in 8085?

b. Write the execution flow in steps for instruction CC 2200H .

c. Write the assembly language program to arrange the data available in memory location from 2000H to 2009H in descending order.

d. Draw the SIM instruction word and explain the function of all bits in it.

e. Explain the function of serial I/O control of 8085

f. Interface DAC to 8085 and write the program to generate square wave using DAC.

Q4. Attempt any FOUR **(16 Marks)**

a. Draw the flag register of 8085 and write the functions of each bit.

b. State the functions of instructions a) SHLD address b)RET

c. Write the assembly language program to add 8 bit numbers available in memory location from 2500H to 2509H.

d. Generate control signals such as memory read ,write ,I/O read write using decoder.

e. Explain the control word format of 8255.

f. Draw the neat labeled minimum system using 8085,8155 and 8355.

Q5. Attempt any FOUR **(16 Marks)**

a. What do you meant by stack pointer ? where it is used?

b. List the various instructions of 8085 to clear the content of accumulator.

c. Write the interrupts of 8085 with their priority and vector address.

d. Compare EI and DI instruction.

e. Write the timer modes of 8155 and explain any one with the timing diagram.

f. Draw the block diagram of 8255.

Q6. Attempt any FOUR **(16 Marks)**

a. Explain the functions of instruction register and instruction decoder of 8085.

b. Write an assembly language program to find the complement of 8 bit number.

c. Write the advantages of subroutines.

d. LED is connected to SOD line of 8085. Write the instruction to 'ON' the LED.

e. Draw the block diagram of 8355

f. Interface the ADC to 8085 and write assembly language program to convert analog data to digital data.