PG/IIIS/ELC-305/13(Pr.)

M.Sc. 3rd Semester Examination, 2013

ELECTRONICS

(*Microprocessor programming*)

(Practical)

PAPER – ELC-305

Full Marks : 50

Time : 3 hours

Answer any **one** question, selecting it by a **lucky draw**

The figures in the right hand margin indicate marks

1. Write an assembly language program to arrange 05 bytes of data in descending order. The data are stored in memory locations starting from X050H. Repeat the process with three different arrays.

2. Write an assembly language program to find the smallest number in a given array of 10 elements. The array is stored in the memory locations starting from X200H onwards. Store the result at the memory location X300H. Repeat the process with three different arrays.

3. Write an assembly language program to transfer a block of data stored in memory locations X050H to X05FH. The data are to be stored from location starting from X300H to X30FH in reverse order. Repeat the process for three different blocks of data.

4. Write an assembly language program to count number of 1 and 0 bits in a byte stored in *B* register. Store number of 1 in *H* register and that of 0 in *L* register. Repeat the process with 5 different data.

5. Write an assembly language program to convert a hex number into its ASCII equivalent. The hex number is stored at location X200H and store the result at location X201H. Repeat the process with 5 different data.

6. Write an assembly language program to convert a 2-digit BCD number stored at memory address X200H into its binary equivalent number and store the result in a memory location X300H. Repeat the program for 5 different data.

7. Write an assembly language program to convert an 8-bit binary number stored at memory location XX00H into its equivalent Gray code. Store the result in the memory address XX50H. Repeat the program for 5 different numbers.

8. Write an assembly language program to convert an 8-bit Gray code into its binary equivalent number. The Gray code is stored in memory address X200H and the result is to be stored in a memory location X300H. Repeat the process for 5 different Gray codes.

9. Three single byte numbers are to be stored in three consecutive memory locations. Write an assembly language program to find the LCM of the numbers and store the result in a memory address just after the data locations. Repeat the program for 5 different sets of data.

10. Write an assembly language program to find HCF of three 8-bit numbers stored in three consecutive memory locations. Store the result in a memory address just after the data locations. Repeat the process with 5 different sets of data :

Distribution of Marks

Flowchart	:	05 Marks
Assembly language program	:	10 Marks
Execution of the program	:	15 Marks
Discussion	:	05 Marks
Viva-voce	:	10 Marks
Laboratory note book	:	05 Marks
Total	:	50 Marks