

ASUTOSH COLLEGE
(Affiliated to University of Calcutta)

Semester V – Practical Examination, 2020

Electronics – Honours

Paper – CC-12

Full Marks – 30

Time – 1hr 30 minutes

Send your answer scripts to: asutoshelta@gmail.com

Answer **any one** question:

1 X 30=30

1. (a) Write an assembly language program to add two 8-bit numbers. Load the input numbers in two consecutive memory locations X H and X+1 H. Keep a provision for carry. Store the sum and the carry in the memory locations X+2 H and X+3 H respectively. Take three sets of inputs for which carry will not be generated and take another three sets of data where there will be carry. Show the outputs in a tabular form. (Flow chart is not required).

15

(b) Write an assembly language program to subtract two 8-bit numbers. Load the input numbers in two consecutive memory locations X H and X+1 H. Keep a provision for borrow or sign bit. Store the difference and the borrow/sign in the memory locations X+2 H and X+3 H respectively. Take three sets of inputs for which no sign/borrow will be generated and take another three sets of data where there will be sign/borrow. Show the outputs in a tabular form. (Flow chart not is required).

15

2. (a) Write an assembly language program to split PQ H into 0P H and 0Q H respectively. Load the input in X H memory location. Store 0P H in X+1 H memory location and 0Q H in X+2 H memory locations respectively. Take four sets of data and show the output in tabular form. (Flow chart is not required).

15

(b) Write an assembly language program to add two 16-bit numbers. Load the first 16-bit number in memory locations X+1 H and X H and the second 16-bit number in the memory locations X+3 H and X+2 H. Keep a provision for carry. Store the sum X+5 H and X+4 H memory locations respectively. Store the carry in X+6 H memory location. Take three sets of inputs for which carry will not be generated and take another three sets of data where there will be carry. Show the outputs in a tabular form. (Flow chart is not required).

15

3. (a) Write an assembly language program to find the number of 1s in a byte of

data. Load the input in X H memory location. Store the result in X+1 H memory location. Take four sets of data including FF H and 00 H. Show the output in a tabular form. (Flow chart is not required). 15

(b) Write an assembly language program to find the number of 0s in a byte of data. Load the input in X H memory location. Store the result in X+1 H memory location. Take four sets of data including FF H and 00 H. Show the output in a tabular form. (Flow chart is not required). 15
