JAWAHARLAL NEHRU UNIVERSITY

SCHOOL OF COMPUTER AND SYSTEMS SCIENCES

Final Term Test

M. C.A. – Final, (Winter Semester-2019)

Course Name: Microprocessor Based Systems

Course Code: CS 113

Maximum Marks: 50

Total Time: 3 hr

Q1. Write a program to count continuously in Hexadecimal from FFH to 00H in a system with 2.0μs clock period. Use register C to set up 1.0 milli second delay between each count and display the numbers in one of the output ports. Draw the programming model and flags for 8085 micro-processor.

(6+4)

Q2. (a) Write a program that checks the prime number. If the number is prime, it will be stored in location 2100.

(b) A set of ten BCD numbers is stored in the memory location starting from 2200. Write a program with a subroutine to add these numbers in BCD. If a carry is generated, save it in register B, and adjust for BCD. The *Final sum will be less than* 9999_{BCD}.

(5+5)

Q3. What is instruction cycle, machine cycle and the T-states?. Explain memory segmentation in 8086 microprocessor. What happens in minimum and maximum mode configuration in 8086 microprocessor?.

(4+3+3)

Q4. Draw the pin diagram, flags and programming model of 8086 microprocessor. What major addressing modes in 8086 microprocessor.

(6+4)

Q5. Write a program that demines and adds first 100 numbers in fibonicci series and stores the result in address 40000.

(5+5)