S.V.NATIONAL INSTITUTE OF TECHNOLOGY
Department of Computer Science and Engineering
B.Tech. II - Semester – IV - Mid Semester Examination

11th March – 2022   Microprocessor and Interfacing Techniques (CS202)   Seat No. _____
[Time: 30 Min.]   PART-2   [Total Marks: 15]

1.   Answer to the following:

a.   Explain with example (i) Difference between XTHL and SPHL (ii) An 8085 instruction   04
     which uses Auxiliary Carry Flag while executed (iii) SIngle 8085 instruction which can
     perform rotation left by one bit for given 16 bit data (iv) 8085 Instruction/s to implement
     unconditional jump without using JMP instruction.

b.   Considering the following segment of 8085 ALP. Draw and explain the timing diagram for   04
     instruction placed at 2007 memory location considering the given data. Justify your
     answer.

            2000 LXI SP,FFF3H
            2003 LXI B,FF7AH
            2005 MOV A,C
            2006 ADD B
            2007 CC NEW
            200A …..
            200B …..
            NEW(200F): ….
            …..

c.   (i) Write an 8085 ALP for checking a byte stored at 4000H as per following format. First   03
     check the higher order three bits are 0 or not. If they are 0, then we check the next five
     bits. If there are exactly three 1s in these 5-bits, then store FF or else store 00H at 4001H

     (ii) Write an 8085 ALP to check if a given set of N bytes are unsorted, sorted in ascending   04
     order, or sorted in descending order. Store in location 4000H the value 00, 01, or 02
     accordingly. N is specified at 30FFH.