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

4th March – 2021 Microprocessor and Interfacing Techniques (CS202) Seat No. _____

[Time: 35 Min.] PART-1 [Total Marks: 14

1. Answer to the following:

a. Write an 8085 Assembly language Program (ALP) to implement RST 5 Breakpoint routine which will cause 4 LEDs connected via D7-D4 to flash 10 times with delay of 1 Sec., when RST 5 is executed. Assume clock frequency of 2Mhz to implement delay routing of 1Sec. 04

b. Draw the waveform indicating the variation of signal at the SOD pin of 8085 when the program given below is executed 02

```
MVI A,B0H
SIM
MVI A,00H
SIM
MVI A,B0H
SIM
MVI A,FFH
SIM
MVI A,F0H
SIM
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c. Two 8 bits numbers P and Q are stored in memory. Write 8085 ALP to calculate the value of the expression (P + Q - 100). If the value is negative, calculate the value of R_1 and store at 4500H; otherwise, calculate the value of R_2 and store at 4500H. The equation pertaining to R_1 and R_2 are as follows: 03

R_1 = (P AND Q) OR ((P + 5) OR (Q - 5))

R_2 = ((P + 5) AND (Q – 5)) OR (P – Q).

d. Design and implement interfacing circuit using 8085, 8255, 74138 and appropriate gates to implement IC TESTER which will test the 14 pins 7486 (XOR) IC. Write 8085 ALP to test each XOR Gate of the IC. Assume $Port_A$ address as CFH. 05