11th March – 2022   **Microprocessor and Interfacing Techniques (CS202)**   **Seat No. _____**

[Time: 30 Min.]   **PART-1**   **[Total Marks: 15]**

1.   Answer to the following:

a.   Explain with example following for 8085 interrupts: (i) Need for placing EI in subroutine   02
for maskable interrupts (ii) priority among RST 5.5 and RST 7.5 when they are
executed in the given order.

b.   Write an 8085 Assembly language Program (ALP) to implement RST 7.5 Breakpoint   05
routine which will cause 4 LEDs connected via D7,D5,D3, and D1 to flash 04 times
with delay of 1.5 Sec., when RST 7.5 is triggered with required input. Assume a clock
frequency of 2.5 Mhz to implement delay routing of 1Sec.

c.   (i) Design and implement **SINGLE** interfacing circuit using 8085, 8255, 8253, 74138   03
and appropriate gates to have (a) 50H, 54H, 58H and 5CH as 8255's P_A , P_B , P_C and
control register addresses (b) B3H, B7H, BBH, and BFH as 8253's counter 0, 1 , 2 and
control register addresses.

(ii) For the above 8255 interfacing circuit, implement IC TESTER which will test the 14   05
pins 7402 (NOR) IC. Write 8085 ALP to test
each NOR Gate of the IC.