

U.G. 4th Semester Examination - 2021**BCA****Course Code : BBCACCHC 402****Course Title: Microprocessor 8085**

Full Marks : 30

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **ten** questions: 1×10=10
- a) If the clock frequency is 3 MHz, how much time is required to execute MVI C, 21H ?
 - b) What are the functions of accumulator?
 - c) Write the name of the addressing mode of the following instructions:
STAX B and MVI A, 2BH
 - d) Define opcode.
 - e) When auxiliary carry flag is set?
 - f) What is mnemonics?
 - g) What do you mean by Micro-computer ?

- h) How much time is required to execute 'ADI 02H' instruction if clock frequency is 3MHz?
- i) Why 8085 μ p is a 8-bit Microprocessor ?
- j) Define subroutine.
- k) What will be the content of the CY flag, after execution of the following program?

MVI A, FFH

INR A

- l) Why do we use 'XRA A' instruction?
 - m) What is meant by 'vectored' and 'non - vectored' interrupt?
 - n) Define the purpose of clk signal in 8085 μ p.
 - o) How long INTR signal stay high?
2. Answer any **five** questions: 2×5=10
- a) Specify the content of Accumulator and flag register after the execution of the following instruction:
MVI A, 91H
MVI B, 58H
ADD B
ORA A

- b) Briefly discuss about control signals of 8085 μ p.
- c) What is tri-state logic?
- d) What is the reason of demultiplexing of address-data bus?
- e) Draw the bit pattern of flag register and also explain when they are set and reset.
- f) What is the purpose of RIM and SIM instruction?
- g) If 8085 μ p subtracts 23H from B1H, then specify the content of A, S, Z, and CY.
- h) What is the value of accumulator and flag register if we A9H with 7CH?

3. Answer any **two** questions: 5×2=10

- a)
 - i) Write the use of ORA instruction.
 - ii) Draw the timing diagram of the instruction 'MVI A, 05H'.
- b) Give the utilities of the following instructions: 'PUSH', 'STAX', 'DAD', 'CPI', and 'XRA'
- c)
 - i) What is interrupt?
 - ii) What is DMA?

- iii) Write an assembly language program to transfer a block of memory (with their content) to another location. 1+1+3=5
