

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2019
(Sixth Semester)

Branch - PHYSICS

MICROPROCESSOR ARCHITECTURE AND PROGRAMMING

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 2 = 20)

- 1 What are assembly language and machine language in 8085 microprocessor?
- 2 List the sequence of events that occurs when the 8085 MPU reads from Memory.
- 3 Why the number of output ports in the peripheral mapped I/o is restricted to 256ports?
- 4 What is a Flag? What is its purpose in 8085 architecture?
- 5 Define opcode and operand and specify the opcode and operand for a 2-byte instruction by considering an example.
- 6 What is an Assemblers?
What will be response of the 8085 processor if you type LDA with 16-bit address?
- 8 How to set a conditional loop in 8085? Name instructions which are generally used for this purpose.
- 9 List any two similarities between CALL and RET and PUSH and POP instructions.
- 10 What is subroutine? How it is incorporated in the programming of 8085?

SECTION - B (25 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25)

- 11 a List the components of a computer and exam is their function.
OR
b What are the internal data operations associated with the internal architecture of 8085? Explain.
- 12 a Name the externally initiated signals of 8085 processor including the interrupts and explain each of them in a sentence.
OR
b How the input devices are interacted in 8085 processor? Explain the step by step activity.
- 13 a Draw the programming model of 8085 and explain each one of them.
OR
b What is meant by debugging in a program? How this could be effectively implemented?
- 14 a What are the instructions available for arithmetic operations related to memory? Name and explain them.
OR
b Write instructions to add the contents of the memory location 2040(H) to (A) and subtract the contents of the memory location 2041 H from the first sum. Assume the accumulator has 30H, the location 2040 FI has 68 H and location 2041 H has 9F H.
- 15 a What is the purpose of stack pointers in 8085 microprocessor? Which instructions activate the stack pointer? Explain.