

**MICROPROCESSOR ARCHITECTURE & 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 is a microprocessor? •
- 2 List out the components of a computer.
- 3 Give any two different between memory mapped I/O and I/O mapped I/O scheme.
- 4 What are the two parts of debugging process?
- 5 Mention the arithmetic operations performed by 8085 microprocessor.
- 6 Write the use of disassembler.
- 7 Define the term "Indexing".
- 8 Define the term "looping".
- 9 Write the steps involved in "BCD to binary conversion".
- 10 What is meant by nesting? •

**SECTION - B (25 Marks)**

Answer ALL Questions

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

- 11 a Write a note on large computers and microcomputers.  
OR  
b Write the advantages of an assembly language in comparison with high level language.
- 12 a Explain I/O mapped I/O scheme in detail.  
OR  
b Explain the flow of data from memory to MPU using necessary block diagram and timing diagram.
- 13 a Write the steps involved to write the assembly language Programme.  
OR  
b Write a note on debugging process in programme.
- 14 a Explain the arithmetic operations related to memory in detail.  
OR  
b Write the instructions needed to copy the data from memory to microprocessor.
- 15 a Explain the uses of PUSH and POP instructions with example.  
OR  
b Write a program to convert a BCD number into seven segment LED code.

**SECTION - C (30 Marks)**

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Explain the architecture of microprocessor and its operations.
- 17 Explain the working of 8085 based single board microcomputer.
- 18 Explain the various Branch operations in detail.
- 19 Explain continuous and conditional looping in detail using flow charts. -
- 20 Explain BCD subtraction with carry using a programme with subroutines.