

Roll No. ....

Total Pages : 3

**005503**

**Jan. 2022**

**B.Tech. (EL) Vth SEMESTER  
MICROPROCESSORS (ELPC-503)**

Time : 90 Minutes]

[Max. Marks : 25

*Instructions :*

1. *It is compulsory to answer all the questions (1 mark each) of Part-A in short.*
2. *Answer any three questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

**PART - A**

1. (a) What is the maximum memory size that can be addressed by 8086? (1)
- (b) What is the addressing mode of MOV AX, 45H [BX] [SI] ? (1)
- (c) What are various modes of operation in microprocessor 8086? (1)
- (d) Differentiate between a procedure and a macro. (1)

- (e) What are the various addressing modes in microprocessor 8085. (1)
- (f) Draw the control word of Intel 8255A (1)
- (g) What is the significance of pin TEST in 8086? (1)
- (h) Discuss 'pipelining' with respect to microprocessor 8086. (1)
- (i) Draw the flag register of microprocessor 8086. (1)
- (j) List the major features of microprocessor 8085. (1)

**PART - B**

- 2. (a) Illustrate the timing diagram of instruction MVI B, 25H. (3)
- (b) Discuss the functions of program counter, stack pointer and status flags in the architecture of 8085 microprocessor. (2)
- 3. (a) Discuss the register structure of microprocessor 8086. (2)
- (b) In 8085, write an assembly language program to multiply two 8-bit numbers. (3)
- 4. Discuss with block diagram the architecture and pin diagram of microprocessor 8085. (5)

- 5. (a) Write a program to add a data byte located at offset 0500H in 2000H segment to another data byte available at 0600H in the same segment and store the result at 0700H in the same segment. (3)
- (b) Discuss the following instructions with suitable examples :
  - (i) IMUL. (2)
  - (ii) DAA. (2)
  - (iii) TEST. (2)
  - (iv) XCHG. (2)
- 6. (a) Discuss the assembler directives Size and Global. (2)
- (b) Discuss the modes of operation of Intel-8254 (3)