

LTS

Microprocessor

E-7

2K5-CS-4

Roll No.: 1804051002

@darsh

M.M. 100

Time : 3 Hrs.

Note :

1. Part 'A' may be attempted in first 5 pages of Answer Sheet.
भाग 'क' के सभी उत्तर, उत्तर-पुस्तिका के प्रथम पांच पृष्ठों में ही करने हैं।
2. Part 'B' in rest of the Sheets of Answer Sheet.
भाग 'ख' के उत्तर, उत्तर-पुस्तिका के अगले शेष पृष्ठों में लिखिये।
3. Answers may be given in English or Hindi.
प्रश्नों के उत्तर अंग्रेजी अथवा हिन्दी में दीजिये।

Part 'A'

1. Attempt any ten questions:

10x2= 20

- (i) Define instruction cycle.
- (ii) Explain indexing.
- (iii) Define asynchronous data transfer.
- (iv) What do you mean by intercept process?
- (v) Differentiate between microprocessor and micro controller.
- (vi) What is role of RS 232C?
- (vii) Define peripheral controlled data transfer.
- (viii) Define interrupt priority.
- (ix) Explain timing diagram.
- (x) Define PUSH and POP operation.
- (xi) Give example of bit address and byte address.
- (xii) What do you mean by address and data buses?
- (xiii) What are SIM instructions?
- (xiv) List the role of supporting chips.

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2. Attempt any 5 of the following questions:

5 x 4 = 20

- (i) Explain in detail synchronous and asynchronous data transfer.
- (ii) Explain the role of memory mapped I/O and I/O mapped I/O.
- (iii) Define in brief the following :
 - a) Logic instruction

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- b) branch instruction
- c) Machine control instructions
- (iv) Explain the various addressing modes of 8085 microprocessor.
- (v) Explain 8255 programmable peripheral interfaces in detail.
- (vi) Discuss arithmetic operation of 8085 microprocessor.
- (vii) Mention the functions of MEMR & MEMW in 8085.
- (viii) Define address bus and data bus.

PART-B

Attempt any 3 of the following questions:

3 x 20 = 60

- 15 ✓ 3. (a) Explain conditional and return instruction in microprocessor programming.
(b) Draw and explain the timing diagram for read and write operation.

25 ✓ 4. Write short on the following :

- i) DMA controller
- ii) Interrupt driven data transfer
- iii) Stack and its function
- iv) Arithmetic instruction

- + 5. (a) What building block are necessary for any microprocessor?
(b) Compare 8085, 8251 and 8253

12 ✓ 6. List the use of the following.

- i) counters
- ii) time delays
- iii) Stacks
- iv) Routines

7. (a) Write a program for the additions of two 16-digit numbers.
(b) Explain in detail about machine cycle of 8050.