

B.Tech. IV Semester (Main/Back) Examination, May- 2018
 Computer Sc. & Engg.
 4CSI A Microprocessors & Interfaces
 CS, IT

Time : 3 Hours

Maximum Marks : 80
 Min Passing Marks : 26

ersahilkagyan.com

Instructions to Candidates :

Attempt any **five** questions, selecting **one** question from each unit. All Questions carry **equal** marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Unit - I

1. a) Explain 8085 Bus structure in detail. (8)
- b) Explain the basic four operations commonly performed by the Microprocessing Unit. (8)

OR

1. a) Differentiate between static and dynamic RAM. (8)
- b) i) How many bits are stored by a 256×4 memory chip? Can this chip be specified as 128- byte memory? (6)
- ii) What is the function of the accumulator? (2)

Unit - II

2. a) What are addressing modes? Explain each type in detail. (8)
- b) Write a set of instructions to perform an addition and a subtraction (in 2's complement). (8)

OR

2. a) Explain the followings: (4×2=8)
 - i) MOV
 - ii) NOP
 - iii) IN and OUT
 - iv) HLT

2. b) What is 'Modular design approach'? Discuss different steps to design and run assembly language program. (8)

Unit - III

3. a) Define the stack, stack pointer (register) and program counter. Also describe their uses. (10)
- b) What are counters? Explain with a suitable example. (6)

OR

3. a) What are subroutines? Explain its parameter passing. (8)
- b) Explain RST instructions and their uses in detail. (8)

Unit - IV

4. a) Design a block diagram of 8255 I/O parts. Also explain their modes in detail. (10)
- b) What is control register? (6)

OR

4. a) Discuss 8254 control word formats in detail. (8)
- b) List the major components of the 8279 keyboard/display interface and explain their functions in brief. (8)

Unit - V

5. a) Design a driver circuit block diagram for connecting MPV with Liquid crystal display. (10)
- b) Discuss different Microprocessor applications in detail. (6)

OR

5. Write short note on: (any two) (2×8=16)
- a) RS 232C
- b) Parallel interface
- c) Matrix key board

ersahilkagyan.com