

1. All questions are compulsory.
2. All questions carry equal marks.
3. Draw neat labelled diagrams wherever necessary

Q.1 Attempt the following (Any Three)**[15 Marks]**

- a. Draw and explain Microprocessor Controller Temperature System.
- b. Write a short note on 8085 Programmable registers.
- c. Difference between Static RAM and Dynamic RAM.
- d. Draw and explain 4 to 2 line Encoder.
- e. Draw the functional block diagram of 8085 microprocessors.
- f. Explain the function of following pins:
a) AD0-AD7 b)READY c)HOLD & HLDA d)X1X2 e) SOD & SID

Q.2 Attempt the following (Any Three)**[15 Marks]**

- a. Write a short note on seven segment LED.
- b. What is addressing modes? Explain different types of addressing modes of 8085.
- c. Explain the following instructions in detail:
a) MVI C, 10 H b) STA 16 bit address c) CMP R
b) d)JNZ 16-bit address e) RRC
- d. Explain the following instructions in detail:
c) LXI rp, 16-bit data b) LDAX rp c) INX rp d)CPI 8-bit data
e) JC 16-bit address
- e. Write an assembly language program of 8085, to subtract 8 bit numbers store at memory location from C201H to C200H and store the result at memory location C300H.
- f. Draw and explain OUT instruction of 8085.

Q.3 Attempt the following (Any Three)**[15 Marks]**

- a. Give the difference between Non Maskable and Maskable Interrupts.
- b. Explain the Restart instruction of 8085.
- c. Explain Conditional Call instructions of 8085.
- d. Explain the concept of looping and counting.
- e. Explain PUSH and POP instructions of 8085.
- f. Explain stack and subroutine.

Q.4 Attempt the following (Any Three)**[15 Marks]**

- State the difference between General Purpose Computer System & Embedded System.
- What are the applications of embedded system?
- Explain common Memory problems.
- Write a short note on control and status register.
- Draw pin diagram of 8051 microcontroller.
- Explain device driver.

Q.5 Attempt the following (Any Three)**[15 Marks]**

- Explain the structure of Infinite loop.
- Draw and explain the concept of build process.
- Write a short note on IDE.
- List and explain the different types of file generated on cross compilation.
- Explain the product development life cycle.
- Write a short note on linking and debugging.