1. The starting memory address of 1K-Byte memory chip is given as B8FEH. specify the end address. [3]

2. Calculate the time required to execute the instruction STA-address. The microprocessor clock frequency is 3MHz. [3]

3. Write the addressing modes for the following instructions:

   ANI 85H
   MOV B,C
   LDAX D [3]

4. How is de-multiplexing of address and data buses done and control signals generated in 8085 microprocessor? Explain with the help of a detailed schematic diagram. [10]

5. Write a program to add two 8-bit numbers using indirect addressing mode. The starting address of program should be 31FBH. Store the input data at 2100H and the sum and carry at memory location 2102H and 2103H respectively. [5]

6. Explain each step of the following program and identify the contents of register C and the status of the flags S,Z,P and CY:

   MVI A, FAH
   LXI H, 2150H
   MVI M, 9FH
   ADD M
   MOV C,A
   HLT [10]

7. Describe different addressing modes in 8085 microprocessor, give one example of each addressing mode. [5]

8. Draw the logic pin out diagram of 8085 microprocessor wherein all the different signals are depicted and classified in different groups. [5]