Question Bank

a. Description of Instructions

Q1. If BH = 0F3H what is the value of BH in hex after the instruction SAR BH, 1

Q2. IF AL = 78H and BL=73H explain how DAS instruction (after subtracting BL from AL) adjusts to the BCD result

Q3. If CL=78H what is the value of CL after the instruction ROL CL, 3

Q4. Why AAD is to be executed before DIV instruction while converting unpacked BCD to Binary number

Q4. Under what conditions REPE MOVS executes

Q5. Explain XLAT instruction to linearize transducer characteristics

Q6. Explain intra segment and inter segment branch instructions with examples the instructions related to arithmetic and logical shift.

Q7. Explain all addressing modes with the assembler syntax and how effective address is calculated

b. Assembly directives.

Q1. Explain EQU directive with example

Q2. Explain SEGMENT directives with examples

Q3. Explain coding template for 8086 instruction

c. Algorithms with assembly software programs

Q1. Write an algorithm to compute Fibonacci numbers using a recursive procedure. Write 8086 assembly program for the above

Q2. Write an algorithm and assembly program to convert an unpacked 4 digit number to Binary number.

Q3. Write an algorithm and assembly program to convert a 16 bit number to a maximum of 5 unpacked digits

Q4. Write an algorithm and assembly program to convert an unpacked 4 digit number to Binary number.

Q5. Write an algorithm and assembly program to find the square root of a 16 bit number using shift and subtract method.

Q6. Write an algorithm and assembly program to reverse the bits in a 16 bit number and check whether it is a palindrome.

Q7. Write an algorithm and assembly program for a cash bill of n materials. Rupees is a 4 digit and paisa is a 2 digit number which are stored in two different arrays. Find the total amount for the n materials. Subtract 10% discount on the total and give the actual amount to be paid. Hint Shift the total amount by one digit to get the 10% discount and get the actual amount.