1

a. Write an ALP to take two 8-bit BCD numbers as input from user and display sum as BCD. [10]

b. Write a MLP to calculate x^y. [5]

2

a. Write an ALP to take two 8-bit BCD numbers as input from user and display difference as BCD. [10]

b. Write a MLP to evaluate
A = B * C / D [5]

3

a. Write ALP to add two 16-bit BCD numbers given in program and store the 16-bit BCD result in a memory location. [5]

b. Write a far procedure to find the square of a number. Get the 2-digit BCD input from user, and display the BCD output on screen. [10]

4

a. Write an ALP to subtract two 16-bit BCD numbers given in program and store the 16-bit BCD result in a memory location. [5]

b. Write an ALP to check the validity of a given password using CMPSB instruction. [Note: user's entry should not be visible] [10]

5

a. Write an ALP to multiply two 16-bit BCD numbers given in program and store the hexadecimal result in a 32-bit memory location. [10]

b. Write a MLP to evaluate
(A + B) * (C – D) [5]

6

a. Write an ALP to divide two 16-bit BCD numbers and store the hexadecimal quotient and remainder in two 16-bit memory locations. [10]

b. Write a MLP to convert given temperature from Fahrenheit to Centigrade. [◦C= (◦F-32)*5/9] [5]

7

a. Write an ALP to take two 8-bit BCD numbers as input from user and display the product as BCD. [10]

b. Write a MLP to display the area of a triangle taking b and h from user. [area = 0.5*b*h] [5]

8

a. Write an ALP to display N natural numbers in descending order. [10]

b. Write an ALP to copy a string to another using MOVSB instruction. [5]

9

a. Write an ALP to print Fibonacci series upto given N. [10]

b. Write an MLP to swap two numbers given in memory locations. [5]

11

a. Write an ALP to take two 8-bit BCD numbers as input and display the quotient and remainder as BCDs on screen. [10]

b. Write a MLP to compute the surface area of a given sphere. [$4*pi*r^2$] [5]

13

a. Write a C/Java/Python program to translate a given logical address to physical address using 80386DX address translation mechanism. [9]

b. Write an ALP to compare two strings given in program and print "same" or "different" on screen using CMPSB instruction. [5]

15

a. Write an ALP to display the maximum and minimum elements of an user given array of 10 numbers. [10]

b. Write a MLP to convert given temperature from Centigrate to Fahrenheit. [◦F= (◦C*9/5)+32] [5]

10

a. Write an ALP to concatenate two strings using string instructions of 8086. [10]

b. Write a MLP to calculate the area of a circle. [$pi*r^2$] [5]

12

a. Write an ALP to take a two digit BCD input from user and save it as its hexadecimal equivalent in a memory location [AAD] [7]

b. Write a MLP to find the LCM of two numbers. [8]

14

a. Write an ALP to display the count of even and odd parity elements in an user given array of 10 numbers. [10]

b. Write a MLP to compute roots of a quadratic equation with given a, b, c by user. [$r = b^2 - 4ac$] [5]

16

a. Write an ALP to display the factorial of a given number [0-8] using recursive procedures. [8]

b. Write a MLP to find the greatest of three numbers [7]

17

a. Write an ALP to convert a 8-bit hexadecimal number given in a memory location to its equivalent BCD, and display it. [AAM] [7]

b. Write a MLP to find the GCD of two numbers. [8]

19

a. Write an ALP to store the full name of a person in one string, given the first name and last name as separate inputs. [10]

b. Write a MLP to evaluate A-B*C+D (use BODMAS) [5]

21

a. Write an ALP to display if a given string is a palindrome or not. [10]

b. Write a MLP to swap two given numbers. [5]

23

a. Write an ALP to swap two numbers using near procedures. [10]

b. Write a MLP to calculate the total salary of a person, given basic pay.
Total salary = basic + DA + HRA-Tax.
Assume: DA = 50% of basic pay
HRA = 5 % of basic pay
Tax = 10% of basic pay

18

a. Write an ALP to display the sum of digits of a user entered 4-digit BCD. [10]

b. Write a MLP to display the grade of a student, given the marks.
(A: >80, 79>B>60, 59>C>40,F>39) [5]

20

a. Write an ALP to display the count of even and odd elements in an user given array of 10 numbers. [10]

b. Write a MLP to display the smallest of two numbers. [5]

22

a. Write an ALP to display the sum of 10 user given array elements. [10]

b. Write MLP to find the average of three numbers. [5]

24

a. Write an ALP to display N numbers in ascending order. [10]

b. Write a MLP to check if a given number is prime or not. [5]
