1. a) Write an assembly language program to perform the two, 64-bit data addition and subtraction using multiple register load/store instruction.

b) Interface a 4x4, keypad to LPC2148 microcontroller, if key is pressed display it on 7

segment.

1. a) Write an ALP to arrange the given 32 bit, ‘N’ numbers in ascending order using bubble sort technique.

b) Interface LCD to LPC2148 microcontroller display the given message in single line.

1. a) Write an ALP to compute nCr, where ‘n’ and ‘r’ are positive numbers.

b) Interface DAC module to LPC2148 microcontroller to generate square waveform.

1. a) Write an ALP to find the factorial of a given number.

b) Interface DAC module to LPC2148 microcontroller to generate sawtooth waveform.

1. a) Write an ALP to convert the given BCD number into Hexadecimal form.

b) Interface 7-segment display module to LPC2148 microcontroller to count from

0-F.

1. a) Write an ALP to convert the given unpacked BCD number to hex form.

b) Interface 8 LEDs to LPC2148 microcontroller blink them with suitable time delay

1. a) Write an ALP in THUMB mode to compute the given series 12+ 22 + 32+42+…..+102

b) Interface 4, 7-segment display to LPC2148 microcontroller modules to count from

0000-FFFF.

1. a) Write an ALP in THUMB mode to find the largest and smallest number in a given

array of data.

b) Interface DAC module to LPC2148 microcontroller to generate sine waveform.

1. a) Write an ALP to arrange the given 32 bit, ‘N’ numbers in descending order using

bubble sort technique.

b) Interface DAC module to LPC2148 microcontroller to generate triangular waveform.

1. a) Write an ALP in THUMB mode to find the Factorial of a given number.

b) Interface 4, 7-segment display to LPC2148 microcontroller module to count from

0000-FFFF.

1. a) Write an ALP to copy a given string from source to destination memory location and

reverse it.

b) Design and interface 8 LEDs to LPC2148 microcontroller to generate a given pattern

sequence.