QIP Program on 'Microcontroller Architectures and Hands-on-sessions on

Embedded Systems' - QUIZ

Date: June 21, 2019 Time: 1 hr

Aim: To read the switch inputs, perform operation on the read values, display the corresponding read values on the LEDs and result of the operations on the LCD.

Description: Aurum v1.3 board is having a socket for a 4-pin DIP switch (each switch is numbered) and 4-slots for LEDs, numbered 1, 2, 3 and 4.

Tasks:

1. Consider, 2-bit inputs A and B. Use the 4-pin DIP switch to the set the input values for A (Port pins- RB7, RB6) and B (Port pins- RB5, RB4).

2. Show the set input values on the LEDs (RB3 --- RB0) after 1 sec for the switch inputs (RB7 --- RB4 resp). (2)

3. Do the following operations on the inputs A and B: (4)
   a) A + B
   b) A – B
   c) A * B
   d) A & B

4. Show the output (integer value) value at the following address locations on the LCD. (4)
   a) A + B at (0x80)
   b) A – B at (0x88)
   c) A * B at (0xC0)
   d) A & B at (0xC8)