Lovely Professional University

Continuous Assessment-1

Computer Organization and Design

Set-A

M.M: 30 Date of submission:25th Sept'21

Q.1 Design a circuit that would be able to shift bits but also store them for a duration of time. Explain what are the technicalities of such a circuit. [5 marks]

Q.2 As a designer you have to obtain results using registers to following equation:

R3 <- R1+R2

What would be an appropriate circuit to do so and why? [5 marks]

Q.3 Design a bus system that can support 4 registers of 2 bits each. Explain why you created the bus in this method. Also explain how to gather data from this bus back into register. [10 Marks]

Q.4 A hardware implementation is required for executing the following equations, draw proper diagrams to complete your results. [5 marks]

1- x+y+z+a.b : R3 <- R4-R5

2- a.c.b+d : R3 <- R4+R6

Q.5 Explain with examples [5 marks]

1- Shift left

2- Shift right

3- Circular shift

4- Computer organization