

Name:

Roll No:

Write answer in the space provided. Draw diagram for ASM if asked.

Q1: [5 Marks] Draw ASM chart for a 10 bit up-counter with reset. Identify all the ASM Blocks for your designed ASM chart.

Q2: [3+3 marks] Design a 4 input configurable logic box using three 3 input LUTs. Draw necessary diagram for interconnection between LUTs. No extra gates/digital blocks are allowed. State required bits/data to be put into LUTs if necessary to implement the 4 input CLB.

Q2: [4+3+3 marks] (a) Draw ASM charts to **find sum of first N odd integers starting from 1** and identify all the ASM Blocks for your designed ASM chart, (b) Identify required components of required data path for your design, (c) Identify required control signal, and generate the entire control signals.