

Total Marks: 10

**As suggested by D. Sarkar, the diagram should depict:**

- How the individual modules like 'Adder/Subtractor', 'AND', 'OR', 'Ex-OR', 'NOT' and 'Shift' modules combine to produce the first output. In this context, the function selection code versus the operation should be clearly cited. Marks:3
- How the adder module is extended to attain the Adder/Subtractor module; in this context, the diagram should clearly depict how one of the four selection lines is distinguishing between the Addition and Subtraction operations. Marks:3
- How the i-th level shift unit is structured. In this context, the diagram should depict clearly:
  - how the selection lines are used to obtain distinct shift left/right operation.
  - how programmability on B[0] is achieved.
  - how arithmetic/logical shift (SRA/SRL) is distinguished (at the boundary, i.e, for i=31) by means of select lines. Marks:4