Problem 1

Given the sequencing graph in Fig.1:

(a) Schedule the graph with ASAP.

(b) Schedule the graph with ALAP and a latency bound of 5 cycles.
Problem 2

Given the sequencing graph in Fig.1, draw the scheduled graph using Hu’s algorithm with a constraint of three resources. Assume that all operations take one unit of time and that both the multiply and the add are performed by the same resource.

Problem 3

For the sequencing graph from Fig.1, draw the scheduled graph using List scheduling algorithm with at most two multipliers and one adder (at the same time per level). Assume that the multiplier takes two units of time and the adder one. Try to obtain minimum latency subject to the resource bounds.

Problem 4

Given the sequencing graph in Fig.1:

(a) Draw the conflict/interval graphs just for adder operations.

(b) Determine the minimum number of resources for the adder by using the left-edge algorithm (show the coloring steps in both interval and conflict graphs).