

PR 4 – Posted by Dr. Tarek Hegazy, University of Waterloo, tarek@uwaterloo.ca

Description: This is a small project with twelve activities, as shown in the following table along with activities' requirements of two labor resources L1 and L2.

No.	Activity	Duration	Cost	Depends on	Resource Needs	
					L1	L2
1	A	1	\$1,000	----	2	1
2	B	4	\$4,000	1	2	1
3	C	1	\$1,000	1	2	1
4	D	1	\$1,000	2	1	--
5	E	2	\$2,000	2	3	--
6	F	2	\$2,000	3	3	--
7	G	3	\$3,000	3	1	2
8	H	2	\$2,000	3	1	1
9	J	1	\$1,000	4	2	1
10	K	1	\$1,000	9, 5	2	1
11	L	2	\$2,000	6, 7, 8	3	1
12	M	1	\$1,000	10, 11	2	1

Project Constraints:

- Deadline is 12 days. Late Penalty is \$5,000/day. No early completion bonus is used.
- Supervisor reports every 2 days; interest=1%; Markup=5%; and Hold Back=10%.
- No mobilization payment or credit for suppliers is involved;
- Assume no indirect cost.
- Resource limits are **5L1** and **2L2**.

Requirements:

- Use EasyPlan to determine a schedule that meets the resource constraints. **Check your solution.**
- Print the schedule, the project network, and the Cash Flow chart.

Additional work (solution not checked): Try to reach an 11-day solution that satisfies resource limits and still being cheaper.