تکلیف شماره چهار- موعد تحویل: شنبه ۹۴/۸/۱۶- نحوه ارایه جواب: ابتدای کلاس

۱- تخصیص منابع

The activities of a project and related information of them is given in following table. Two renewable resources (R1, R2) and a nonrenewable one (R3) are needed for these activities. The available level of R1 and R2 are 8 and 4 respectively. The initial inventory of resource R3 is zero and it is increased by 50 units in beginning of every period.

Schedule these activities to reach a practical scheduling which satisfy all resource constrained.

Act. Name	Act. Time	predecessor	R1 Req.	R2 Req.	R3 Req.
A	2	-	0	2	150
B	2	-	3	1	100
C	3	-	4	3	100
D	4	A	2	2	350
E	3	B, C	5	1	150
F	3	B, A	0	2	100
G	7	C, F	5	0	50
H	2	D	3	2	100

۲- تسطیح منابع

Using the Burgess Method to find the best schedule for the project whose activities are listed in the following table. Note that there is no any resource constraint and the two resources R1 and R2 are equivalent.

Activity	Resources		D	ES	LS
	R1	R2			
1-2	2	3	6	0	0
2-5	4	1	24	6	6
2-6	3	2	12	6	18
2-3	2	3	3	6	24
1-5	3	1	3	0	27
5-6	-	-	-	30	30
3-6	2	1	3	9	27
3-4	1	2	3	9	27
4-6	-	-	-	12	30

۳-

A project manager seeks to minimize the total cost of a certain activity. The resources used for the activity are Resource V and Resource W (both measured in resource-hours). Resource V costs \$4,000 and Resource W costs \$9,000. Due to certain institutional, physical, and policy constraints, the amount of Resource Y used (y) should be at least 2.5 resource-hours. Also, $1.5y + 2x$ must not exceed 7.45 resource-hours, and $y - x$ must not exceed 1.75 resource-hors. Using a graph sheet, sketch the objective function and constraints on the same cartesian axes and find the optimal solution.

دعا بالاترین قدرت را در جهان، هستی در اختیار دارد.

مرتضی راستی برزکی

rasti.iut.ac.ir