

INDU 421: Facilities Design and Material Handling Systems

Assignment 3

1- An industrial engineer is asked to propose a facilities layout for a manufacturing firm. He is supposed to use prioritization matrix to prioritize his alternatives and propose the best alternative.

Based on the manager decision he has to focus on 4 criteria. After a detailed analysis the following prioritizing matrix of criteria has been generated.

	A	B	C	D
A	1	10	5	5
B		1	1/5	1
C			1	5
D				1

Where A, B, C and D are the criteria to design a layout and the numbers are weights used to compare criteria. (The weights definition is the same as lecture 4)

He also has generated 3 layouts P, Q and R alternatives and the prioritizing matrix of layouts for each criterion is as follow:

Prioritizing layout Based on Criteria A

	P	Q	R
P	1	5	5
Q		1	10
R			1

Prioritizing layout Based on Criteria B

	P	Q	R
P	1	5	1
Q		1	1
R			1

Prioritizing layout Based on Criteria C

	P	Q	R
p	1	10	5
Q		1	5
R			1

Prioritizing layout Based on Criteria D

	P	Q	R
P	1	1	1
Q		1	5
R			1

Rank the alternatives based on the criteria?