INDU 421: Facilities Design and Material Handling Systems

Assignment 4

1- Create manufacturing cells based on the machine-part matrix below. If conflicts or exceptional parts exist, propose alternative approaches.

	P1	P2	P3	P4	P5	P6	P7
M1		1	1			1	1
M2	1				1		
M3			1			1	1
M4				1	1		1
M5		1	1				1
M6	1			1			
Cost of subcontracting the part	*2*	*9*	*27*	*7*	*15*	*4*	*12*

a. Use Binary Ordering Algorithm
b. Use Direct Clustering Algorithm
c. Use Cost Analysis Algorithm. Only 3 machines per cell are allowed.

2- Create manufacturing cells based on the machine-part matrix below. If conflicts or exceptional parts exist, propose alternative approaches.
a. Use Cluster Identification Algorithm

	M1	M2	M3	M4	M5
P1	1		1		
P2	1				
P3		1		1	1
P4	1		1		
P5		1			
P6				1	1