

Group No. 10

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CHAPTER NO. 3

Q.No. 3.22

Q:

Use the DCA to form cells for the machine-tool/parts matrix shown below. If conflicts exist, propose alternative approach for resolving the conflicts.

Sol:

Part #	machine #				# of 1's
	1	2	3	4	
1		1	1		2
2	1				1
3			1		1
4	1			1	2
# of 1's	2	1	2	1	

⇒ STEP 1:

we arrange the # of 1's according to descending order in Row wise and if ties exist b/w two, we write them in the descending order.

⇒ Row wise:

Part #	Machine #				# of 1's
	1	2	3	4	
4	1			1	2
1		1	1		2
3			1		1
2	1				1
# of 1's	2	1	2	1	

⇒ Now arrange the # of 1's in the ascending order in column wise.

⇒ Column wise:

Part #	Machine #				# of 1's
	4	2	3	1	
4	1			1	2
1		1	1		2
3			1		1
2				1	1
# of 1's	1	1	2	2	

⇒ Step 2:

Now which column has 1 in the 1st row, write them in the left.

Part #	Machine #				# of 1's
	4	1	3	2	
4	1	1			2
1			1	1	2
3			1		1
2		1			1
# of 1's	1	2	2	1	

