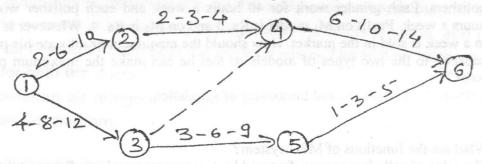
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10.

D) Complete the material requirement plan for an item shown below. The item has an 5 independent demand and a safety stock of 40 is maintained.

Order Quantity=70 Lead Time= 4	WEEK TO THE TRUE THE TRUE THE TRUE THE THE TRUE											
Weeks Safety Stock 40	1	2	3	4 binin	5	6	7	8	9	10	11	12
Project Requirement	20	20	25	20	20	25	20	20	30	25	25	25
Receipts	si q	70	88	ani	E IS	nt ni	SANS	าสุด เมืองรถ	lasa Gum	ng bala	enson	10
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Planned order Release	0				3		5		an	min		

5. A) For the network shown below calculate the probability of completion in 22 days.



B) Following table shows the various activities of a network. The normal cost, time and 12 crash cost, time are also given:

Activity	Norm	nal	Crash		
	Time (Days)	Cost (Rs.)	Time (Days)	Cost (Rs.)	
1-2	3	360	1	400	
2-3	6	1440	2	1620	
2-4	9	2160	of Capa Pienn	2380	
2-5	nislq: 7 i i gam	1120	roi certa 2 rile euor	1600	
3-4	8	400	4 0 1101	800	
4-5 5		1600	1000 2 10A no	1770	
5-6 3		3 480		760	

A boat company makes three different kinds of boats. All boats can be made 20 profitably but the company's monthly production is constrained by limited amount of labour, wood and screws available each month. The director will choose the combination of the boats that maximizes his revenue in view of the information given in the following table:

B)

Input	Row Boat	Canoe	Keyak	Monthly Availability
Labour (Hrs)	12	7	9	1,260 Hrs.
Wood (Board Feet)	22	18	16	19,008 Board Feet
Screws (KG)	2	4	3	396 KG
Selling Price	4,000	2,000	5,000	

Formulate the problem as LPP and solve by Simplex method. A)

4 + 8

From the optimal table of the solved LPP, answer the following questions

B) How many boats of each type are produced and what will be the resulting revenue? 2 C)

Which, if any, of the resources are not fully utilized? If so, how much of spare capacity is left? 3

D) How much wood will be used to make all the boats given in the optimal solution?

Four buildings (B1, B2, B3 and B4) are to be constructed by four different 7. A) contractors (C1, C2, C3 and C4). Each contractor has submitted the bid for the four buildings. The bid amount has been shown below. The problem is to determine which building is to be awarded to each contractor; so as to keep the costs of construction of four building optimum.

Building	Contractor						
	C1	C2	C3	C4			
B1	48	48	50	44			
B2	56	60	60	68			
B3	96	94	90	85			
B4	42	44	54	46			

A company has three factories X, Y, Z. It supplies goods to four warehouses W1, W2, W3 and W4. The production capacities of the factories and demand of the warehouses are as shown in the table. Determine the optimal solution of the problem.

			e trat have			
		WI	W2	W3	W4	Production Capacity
Factory	X	19	30	50	12	7
	Y	70	30	40	60	10
	Z	40	10	60	20	18
Demand	Institut file	5	8	7	15	