

**JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA**

**PGDM / PGDM (M) / PGDM (SM)**

**III TRIMESTER (Batch 2016-18)**

**END TERM EXAMINATIONS**

Course Name	Operations Management-I	Course Code	OP301
Max. Time	2 hrs.	Max. Marks	30

INSTRUCTIONS: All questions are compulsory.

Q1. Explain chase capacity strategy in contrast with constant capacity. (2+2)

As a Operations Manager of a bank, how will you manage the heavy rush during the peak business hours? Enumerate all possible steps which you would like to take to run the branch efficiently.

Q2. What is EOQ Model of Inventory Management? (3+3)

M/s. Sunny Garments has monthly demand of 400 Shirts. The ordering cost is Rs.60 per order. The carrying cost is 5% of the unit cost per year. Each shirt costs Rs.1800. Find out the economic order quantity (EOQ).

Q3. Write short notes on: (3+3)

- Line Balancing in an assembly Line
- Capacity planning

Q4. Matthews and Novak Design Company has been asked to design the layout for a newly constructed office building of one of its client. The closeness matrix showing the daily material handling between six department offices is given below. (6)

Departments	1	2	3	4	5	6
1	-	25	90	0	0	165
2		-	0	0	105	0
3			-	0	125	125
4				-	25	0
5					-	105
6						-

Compare the two block plans given below based on their load distance (no diagonal movement allowed). Suggest which is the better block plan and why?

3	6	1
2	5	4

Block Plan-A

4	6	1
2	5	3

Block Plan-B

Chad's Creative Concepts designs and manufactures wood furniture. Founded by Chad Thomas on the banks of Lake Erie in Sandusky, Ohio, the company began by producing custom-made wooden furniture for vacation cabins located along the coast of Lake Erie and on nearby Kelly's Island and Bass Island. Being an "outdoors" type himself, Chad Thomas originally wanted to bring "a bit of the outdoors" inside. Chad's Creative Concepts developed a solid reputation for creative designs and high-quality workmanship. Sales eventually encompassed the entire Great Lakes region. Along with growth came additional opportunities.

Traditionally, the company had focused entirely on custom-made furniture, with the customer specifying the kind of wood from which the piece would be made. As the company's reputation grew and sales increased, the sales force began selling some of the more popular pieces to retail furniture outlets. This move into retail outlets led Chad's Creative Concepts into the production of a more standard line of furniture. Buyers of this line were much more price sensitive and imposed more stringent delivery requirements than did clients for the custom line.

Custom designed furniture, however, continued to dominate sales, accounting for 60 percent of volume and 75 percent of dollar sales. Currently, the company operates a single manufacturing facility in Sandusky, where both custom and standard furniture is manufactured. The equipment is mainly general purpose in nature in order to provide the flexibility needed for producing custom pieces of furniture. The layout puts together saws in one section of the facility, lathes in another, and so on. The quality of the finished product reflects the quality of the wood chosen and the craftsmanship of individual workers. Both custom and standard furniture compete for processing time on the same equipment by the same craftspeople.

During the past few months, sales of the standard line have steadily increased, leading to more regular scheduling of this line. However, when scheduling trade-offs had to be made, custom furniture was always given priority because of its higher sales and profit margins. Thus, scheduled lots of standard furniture pieces were left sitting around the plant in various stages of completion.

As he reviews the progress of Creative Concepts, Thomas is pleased to note that the company has grown. Sales of custom furniture remain strong, and sales of standard pieces are steadily increasing. However, finance and accounting have indicated that profits aren't what they should be. Costs associated with the standard line are rising. Dollars are being tied up in inventory, both of raw materials and work in process. Expensive public warehouse space has to be rented to accommodate the inventory volume. Thomas also is concerned with increased lead times for both custom and standard orders, which are causing longer promised delivery times. Capacity is being pushed, and no space is left in the plant for expansion. Thomas decides that the time has come to take a careful look at the overall impact that the new standard line is having on his operations.

### Questions

1. What types of decisions must Chad Thomas make daily for his company's operations to run effectively? Over the long run?
2. How did sales and marketing affect operations when they began to sell standard pieces to retail outlets?
3. What might Thomas have done differently to avoid some of the problems he now faces?