UPES

End Semester Examination, May 2025

Course: Manufacturing Operations for FMCG　　　　**Semester　: IV**
Program:　BBA (ALL)　　　　**Time　　: 03 hrs.**
Course Code:　LSCM2014P　　　　**Max. Marks: 100**

Instructions: Students are allowed to use Calculators

SECTION A
10Qx2M=20Marks

S. No.		Marks	CO
Q 1	All questions are compulsory (Short answer types).		**CO1**
1.1	Briefly discuss the key differences between manufacturing and service operations.	**2**	**CO1**
1.2	Discuss the key characteristics of FMCG.	**2**	**CO1**
1.3	Briefly discuss the significance of the BIAS in forecasting.	**2**	**CO1**
1.4	Define the key objectives of materials management.	**2**	**CO1**
1.5	Define the design and system capacities.	**2**	**CO1**
1.6	What do you understand by strategic planning?	**2**	**CO1**
1.7	Give the full form of: MRP-I, MRP-II, BOM, MPS	**2**	**CO1**
1.8	What are the benefits of global operations?	**2**	**CO1**
1.9	List the assumptions made in the basic EOQ model of inventory control.	**2**	**CO1**
1.10	What is the design of excellence?	**2**	**CO1**

SECTION B
4Qx5M= 20 Marks

Q 2	All questions are compulsory		**CO2**
2.1	Define the lean manufacturing, JIT and KANBAN system and their benefits.	**5**	**CO2**
2.2	Discuss the aggregate planning with a suitable example. What are mixed and pure strategies in aggregate planning?	**5**	**CO2**
2.3	What is purchasing? Explain the negotiation and its objectives.	**5**	**CO2**
2.4	Discuss the procedural steps of a new product design	**5**	**CO2**

SECTION-C
3Qx10M=30 Marks

Q 3	Differentiate between FMCG, SMCG, and CPG based on the life span, purchase frequency, prices, and sales volume characteristics. Give suitable examples of each category.	**10**	**CO3**
Q4	a) Explain the design and effective capacities with appropriate examples**. (5 Marks)** b) Compute the efficiency and the utilization of the truck loading department of a logistics company having rated and effective capacities of 70 and 55 trucks per day, respectively. The actual output in terms of the number of trucks loaded is 48 trucks per day. Suggest your solutions to improve the utilization of the truck loading department. **(5 Marks)**	**10**	**CO3**
Q5	a) Suppose you are the head of the purchasing department of an automobile company 'ABC', and you have received a requisition for purchasing a few automotive parts. Discuss the role and responsibilities of your purchasing department in meeting the production schedule. b) Discuss the supplier selection process, considering suitable examples.	**10**	**CO3**
	SECTION-D **2Qx15M= 30 Marks**		
Q 6	a) Discuss the EOQ cost model of inventory control with its assumptions and a cost-quantity sketch diagram. What are the various costs considered in the calculation of the optimum quantity level? (**10 Marks**) b) Electronic Village stocks and sells a particular brand of personal computer. It costs the store $450 each time it places an order with the manufacturer for the personal computers. The annual cost of carrying the PCs in inventory is $170. The store manager estimates that the annual demand for PCs will be 1200 units. Determine the optimal order quantity and the total minimum inventory cost. (**5 Marks**)	**15**	**CO2**
Q 7	a) What is the ATP? How is it calculated? b) Using the following scheduled receipts, calculate the ATP. There are 45 units on hand and a lead time of 1 week. The optimum lot size is 100.		

Week	1	2	3	4	5	6	7	8
Customer Orders	45	5	40	40	40	40	30	15