7. Identify the need and importance of stores function. Explain the role of a store manager in improving profitability. 14

Or

8. Discuss the importance of IOT (Internet of things) in store operations. 14

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PG Odd Semester (CBCS) Exam. December, 2022

Business Administration

(3rd Semester)

Course No: OM-3402

(Materials Management)

Full Marks: 70
Pass Marks : 28

Time: 3 hours

The figures in the right margin indicate full marks for the question.

1. Consider a case of dealer of a certain product for which the probability distribution of daily demand and probability distribution of the lead time, both developed empirically by observation made over a long span of period are as follows :

   Probability Distribution of daily demand :

   Units demanded : 3 4 5 6 7 8 9 10 11 12

   Probability : 0.02 0.08 0.11 0.16 0.19 0.13 0.10 0.08 0.07 0.06

   Probability distribution of lead time :

   Lead time (Days) : 2 3 4 5

   Probability : 0.02 0.03 0.35 0.15

   The ordering costs is known to be Rs. 80 per order, the holding cost per unit per days is estimated at Rs 2, while the unit shortage cost, representing the loss in profits is Rs. 20 per unit per day.

The dealer is anxious to know, for spcific reorder quantities, what would be the total inventory cost (made up of the ordering, holding and shortage costs) and thereby selecting an appropriate combination of the two. As an operations manager evaluate a simulation plan with Random number 00-99, which calls for a reorder quantity of 40 units and a reorder level of 20 units, with a beginning inventory balance of 30 units. You may use random mambers from 00 to 99 for this case. 14

2. A local chocolate distributor at Guwahati deals with a popular brand called 'HBR'. The normal lead time taken by the suppliers of HBR is 10 days. The normal consumption of inventory during lead time is 500 units per days. There are 10 inventory cycles per year. Table shows the consumptions pattern of HBR during lead time (from the past 100 observation). The CC is Rs. 1 per unit per year. The stock out cost is Rs. 2 per unit short. Find the optimum level for HRB.

Table :

Consumption during lead time (units)	Probability
1000	0.01
2000	0.03
3000	0.07
4000	0.14
5000	0.61
6000	0.04
7000	0.07
8000	0.03

14

3. What are the inputs and outputs required by the MRP Processing logic? Discuss the general format of an MRP report using a hypothetical example. 7+7=14

Or

4. "Material Budgeting plays an important role in effective performance of materials function in the industry"— Discuss the material budgeting function in light of the above statement. 14

5. Explain the purchase process in detail. Discuss various steps of purchase cycle. 7+7=14

Or

6. Following table presents data on three vendors of a single items

Suppliers	Inspection Analysis		Price analysis		
	Lot recveived	Lot accepted	Basic Price	Discount	Transport
S_1	75	66	25	5%	1.1
S_2	60	56	28	10%	1.2
S_3	28	28	32	20%	1.5

Supplier	Delivery analysis Delivery Missed
S_1	13%
S_2	9%
S_3	Nil

The management places great importance on quality, price and delivery. The three factors of quality, price and delivery are assigned individual weights of 40%, 35% and 25% respectively for this item. Calculate composite rating of each vendor. 14