

K. J. SOMAIYA INSTITUTE OF MANAGEMENT STUDIES AND RESEARCH

Program: PG RM II TRIM

Subject: Operations Management

End Term examination

Duration: 3 hours

Maximum Marks: 50 Marks

Date : 05/01/2018

ATTEMPT all questions.

Question 1 Case Study- Inventory Management at Ventura Corporation Ltd. (10 Marks)

Ventura Corporation Ltd, one of the leading manufacturers of televisions and radio in India, has recently forayed into the field of Personal Computers (PCs). The company has two manufacturing facilities at two different locations. The company's portfolio prior to inclusion of PCs included five different TV models and six different radio models. When the manufacturing of PCs started, the Operations Manager, Mr. Alok Gupta (Gupta) was confident that he would be able to handle the production requirements of PCs. He was of the opinion that as the company was producing similar electronic products; the current production would not change significantly. The five different models of TV used around 50-60 percent of the same components required for PCs. In radios, the basic components that were common across all models were around 80 per cent.

As the PC market was different from the TV and radio market where products were more or less standardized, the company decided to offer customized PCs on the basis of specifications given by the customers. The company also decided to offer some standard configuration of PCs, which would move fast in the market. The difference between the PCs, and the televisions and radio markets was the scope for customization. As mentioned earlier, in TV and radio manufacturing, more than half of the components remained the same. But in the case of PCs the level of customization possible was very high and varied significantly depending on the individual customer preferences.

There was one more difference between radio and TV manufacturing and PC manufacturing. In case of TVs and radios, the company was manufacturing majority of components internally. Only a very small portion of the components was outsourced from other suppliers. But in case of PCs, the company had to outsource a majority of its components like motherboards, memory chips, processors, hard drives, etc.

Ventura's business model for the PC included taking orders from the customers through its website. Alternatively, customers could place their orders at the retail outlets where Ventura's TVs and radios were available. Once the orders were received, the PCs were assembled and then directly dispatched to the customers. Customers could buy standard PC models from the same distribution network, which was used for distributing TV and Radio.

As the production process began, the differences in the inventory management of older products and PCs became apparent. The production of TV and radio was based on the forecasted demand. On the basis of the demand for these products, production schedules were developed and then on the basis of the production schedule, inventory was procured and managed. But in case of the PCs, the orders were random and there was no way to determine the exact requirement for a particular component of the PC for a particular period of time.

Another concern was the rapidly changing demand and technology. Any part in demand today was not necessarily be preferred after some time and ran the risk of getting outdated due to rapidly changing technology. On the other hand, many components, were costly, required extra care during storage.

Gupta, who was pretty confident of handling production requirements at the beginning of the production process, began to worry after a while. Now he had to be very vigilant all the time to ensure that at any given time all the required materials were available and that additional inventory did not accumulate.

Questions for Discussion

1A..Briefly list the problems Gupta encountered while managing inventory items used in the production of the PCs. Also highlight the reasons for these problems.

1B . Suggest a few steps that Ventura Corporation would use to minimize the cost of inventory.

Question 2 (10 Marks)

Consider that you are the Head of Stores in your organization. You are encountering the following situation very often. You often find yourself struggling to match the actual quantity of many items with the quantity that is mentioned in the Stock Register. You also find that many a times; quite a few items are not useable as they have deteriorated.

For both of the above situations, using QC tools/inventory policies identify all the aspects that you will address, to correct the situation.

Question 3 (10 Marks) Answer **any 2** of these questions (2 * 5 = 10 Marks)

3A. How can the flow of information help to increase customer satisfaction and bring about a reduction in the cost of the product?

3B . It is proposed to set up a plant to mass produce an automobile part from forgings. How would you go about selecting a site for the plant?

3C. How is a job shop different from batch production? Explain with examples.

Question 4 (10 Marks) Answer **any 2** of these questions. (2 * 5 = 10 Marks)

4A. What is the basic difference between a weighted moving average and exponential smoothing ?

4B. Explain different types of costs of quality cost.

4C. What are the various Japanese methods which help improve operations in a plant

Question 5 (10 Marks) Write short notes on **any 2** of the following. (2*5= 10 Marks)

5 A - Types of layouts.

5 B. - New product development.

5 C. - Qualitative method of forecasting

5 D. - Economic Order quantity (EOQ)

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