Seat No.: _____ Enrollment No.: _____

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA (PART-TIME) – SEMESTER (4) – EXAMINATION – SUMMER 2018

Subject Code: 2831101 **Date: 03/05/2018**
Subject Name: Inventory Management, Materials Planning and Management
Time: 2.30 pm to 5.30 pm **Total Marks: 70**

Instructions: **1) Attempt all questions.**
2) Make suitable assumptions wherever necessary.
3) Figures on the right side marks for the respective question.

Q.1 **(a)** Answer the following multiple choice questions: **06**

1. SKU means _____.
   A. Stock Keeping Universe. B. Stock Keeping Unit.
   C. Stock Kept Universal. D. Stock Keeper's Unit.
2. EOQ means _____.
   A. Economical Order Quality. B. Economics Ordered Quantity.
   C. Economic Order Quality. D. Economic Order Quantity.
3. BOM stands for _____.
   A. Bills of Materials. B. Billing of Materials.
   C. Bags of Materials. D. Bins of Materials.
4. Which one of the following is not a Inventory Control Method (System)?
   A. ABC Analysis. B. GOLF Analysis.
   C. VED Analysis. D. DEF Analysis.
5. Which one of the following is not a Materials Coding System?
   A. Decimal System. B. Alpha-numeric System.
   C. British System. D. Kodak System.
6. ROI stands for _____.
   A. Return on Inventory. B. Rate of Interest.
   C. Rate of Investment. D. Return on Investment.

Q.1 **(b)** Define following terms briefly: **04**

1. Variable Costs.
2. Inventory Turnover.
3. Warehousing.
4. Inventory Control.

Q.1 **(c)** What are the major benefits of standardization of materials? **04**

Q.2 **(a)** What are the primary and secondary objectives of Materials Management? **07**

(b) Explain any 2 of the principal systems of codification of materials with examples. **07**

OR

(b) Explain the Probabilistic Inventory Models with an example. **07**

Q.3	**(a)**	Explain the EOQ model for Inventory Control. Graphically represent the EOQ point.	**07**
	(b)	What is reordering point? What are the benefits of having safety stocks?	**07**
		OR	
Q.3	**(a)**	Elaborate about the Just-In-Time system & Vendor Managed Inventory system for inventory management.	**07**
	(b)	Explain the selective inventory control techniques with norms and their applications.	**07**
Q.4	**(a)**	What is Materials Requirement Planning? Explain the three major inputs for Material Requirement Planning system to function.	**07**
	(b)	As a manager how will you look at evaluating how efficient is your inventory control systems?	**07**
		OR	
Q.4	**(a)**	How are you going to evaluate the performance of the Purchasing Department?	**07**
	(b)	What are the major factors that affect inventory levels and its management within an organization?	**07**

Q.5 **Discuss the case study with answers of following questions.** **14**

Mr. Harish Mangla, owner and manager of Mangla Engineering Co., a medium sized maker of industrial products, studied a report from Er. Mittal, product designer and manager of the small pump, the company's major product. The report attributed the customer's complaints about breakdowns to several purchased parts and sub-assemblies, which had been subsequently machined in Mangla's plant. Er. Mittal blamed both "careless manufacturing and poor quality materials" for the failure, and stated that the product's success was built on "a reputation for quality, precision, and trouble-free operation."

Khandekar, manager manufacturing, observed that "quality control and inspections costs had soared since he had to put three extra workers on inspection, as sub-assembly and material quality had deteriorated. There was Rs. 25,654 in rework and overtime here that upset his budget."

Then, Dolly Shaw, purchasing manager, met Harish and said, "Several of our suppliers had told me that they have bitter complaints on the quality of their products from the crowd in the quality control and inspection and receiving departments in manufacturing. According to them, the material was all right as shipped. It is not my job to receive and inspect materials – that's up to manufacturing. But if suppliers are not living up to the specifications on the purchasing order, I want to know about it. Manufacturing should not go behind my back to threaten the suppliers. This has to stop, or I will never be able to get consistent quality from suppliers with everybody calling them."

Mr. Harish Mangla recognized that he had not yet resolved these interdepartmental conflicts. Marketing would try to set specifications as high as possible to ensure 100 percent customer satisfaction; manufacturing would try to pass rework costs and responsibilities for any materials troubles onto the purchasing as poor supplier quality, or to the marketing department as setting unattainable specifications; and purchasing would complain that sloppy machining as assembly or careless inspection caused the trouble. Harish sent a note to Dolly, Er. Mittal and Khandekar:

"The quality problem has apparently got out of hand all along the line from materials to production installation. Please meet me in my office at 9.00 am, Monday, and come prepared to discuss and recommend means of tiding over the present crisis."

Questions:

1. Do you think that the arguments presented by all the three, Er. Mittal, Khandekar and Dolly Shaw are reasonable? Justify.
2. As Mr. Harish Mangla, how would you resolve this issue after listening to the arguments of the three managers?

OR

Q.5 **Discuss the case study with answers of following questions.** **14**

Mr. Gurmeet Singh was the purchase manager at Four Square's saw mill. One day, he saw a travelling requisition (TR) card for 10 carborundum saw blades. The specified blade was made in Switzerland and obtainable through a mill supply house in the UK at a cost of Rs. 2,250 each, f.o.b. Mumbai. Gurmeet observed on the TR that some 110 blades were ordered every year. The requisition specified that no substitutes were permitted. Even so, Gurmeet decided to see if any money could be saved through alternative sourcing. He contacted two of his better mill supply sources to see what they could do.

Both the suppliers were of the view that the Miranda 412 blade was every bit as good as its Swiss counterpart. Based on an annual purchase of eighty or more blades, on supplier quoted a unit price of Rs. 1,125 per blade f.o.b Mumbai. The second supplier's price was Rs. 1,150 per blade f.o.b Mumbai.

Gurmeet then contacted Shamlal Suthar, the foreman of sawing operations at Four Square. Gurmeet explained the potential savings and asked Shamlal to give the Indian blade a try. Shamlal was certain that the Miranda blade would not stand up to the Swiss blade. After a lot of convincing Shamlal agreed skeptically saying, "OK, but I am sure it won't work." Shamlal ordered 10 Miranda blades. He included a provision that any unused blades could be returned or credit if the Miranda did not prove to be equal to the Swiss blade. Two days after the blades arrived, Shamlal entered Gurmeet's office. Shamlal was grinning from ear to ear, holding a saw blade in each hand and said, "Both the blades were burnt as a result of the excess heat generated during the cutting operations." Gurmeet was convinced that the boys in the cutting shop had treated the blades unfairly to ensure their failure.

Questions:

1. Why does Gurmeet think that Shamlal and his boys have purposefully treated the blades badly to ensure their failure? What could be the reason for Shamlal to do this?
2. If you were Gurmeet, what would you have done well in advance to avoid any such unreasonable situation to arise? What can you do now to resolve this issue?

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