Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA - SEMESTER– III EXAMINATION – WINTER 2019

Subject Code: 3539273 Date:05-12-2019

Subject Name: Inventory Management, Materials Planning and Management

Time: 10:30 AM TO 1.30 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q. No.		Question Text and Description	Marks
Q.1		**Briefly explain the following terms** (a) Dependent and Independent demand (b) Bill of Material (BOM) (c) Material Requirements Plan (MRP) (d) Make-to-Stock (e) Economic Order Quantity (EOQ) (f) Vendor Managed Inventory (VMI) (g) Material Requirement Planning (MRP) – II	**14**
Q.2	**(a)**	Define Materials management. What is the purpose of materials management?	**07**
	(b)	What are inventories? What are the five costs associated with inventories?	**07**
		OR	
	(b)	What is the purpose of classifying items into groups, such as the ABC classification does?	**07**
Q.3	**(a)**	What is a material requirement plan? What is the relationship between the MPS and the MRP?	**07**
	(b)	To what does “bill of material structure” refer? Why is it important?	**07**
		OR	
Q.3	**(a)**	Discuss the important of Master production schedule in an MRP system.	**07**
	(b)	What do you understand by safety stock? How is the optimal level of safety stock determined?	**07**
Q.4	**(a)**	Define Just in Time (JIT). Why are supplier relations particularly important in a JIT environment?	**07**
	(b)	Explain various measurements for evaluating the Performance of Materials Management in brief.	**07**
		OR	
Q.4	**(a)**	Explain various measurements for evaluating the performance of purchasing function in brief.	**07**
	(b)	Explain fixed- order quantity model and fixed-time-period model of Inventory system.	**07**

Q.5 **CASE STUDY:**

TVS Motor Company

TVS Motor Company is the third largest two-wheeler company in India and is among the top ten in the world. The company exports its vehicle unassembled to reduce shipping costs. It was facing problems in the order-fulfillment process. The order fulfillment process was entirely manual without any controls integrated into the process and the employees walked through the company's warehouse fulfilling each order. The process resulted in missing or mismatched parts, and the company had to incur extra costs to reship the correct parts. The company lacked visibility of its picking, packing and shipping processes, and a large number of employees were required to fulfill orders.

The company has been using SAP ERP, and it decided to customize it to improve its order fulfillment process. It integrates barcode and wireless technology with the sales and distribution function of SAP ERP. It developed a cart that houses a scanner, a barcode printer, and weighing scale that communicates wirelessly with SAP ERP. Each part's exact location is transmitted to the chart, and hence Employees do not waste time looking for them. Employees do not now count the parts such as nuts and bolts that are shipped in quantity. The parts are weighted on the cart's scale, and when the predetermined weight is reached, a barcode sticker is generated. SAP ERP also ensures that orders are optimally packed and arranged in shipping containers to maximize utilization of space and reduce freight costs. The company was able to eliminate missing and mismatched part in its export orders, and since SAP ERP provides full traceability of international shipments, it can address customer order inquiries quickly. Productivity has improved dramatically. Earlier an employee walked 9.6kilometers to fulfill 90 orders, but now he has to walk just 40 meters to fulfill the same number of orders.

	(a)	What problem did the company face?	**07**
	(b)	How did it solve the problem?	**07**
		OR	
Q.5	(a)	What else could have been done?	**07**
	(b)	Which benefits gained by the company after integrated its control?	**07**

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