

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MBA – SEMESTER III – EXAMINATION – WINTER 2019**

**Subject Code: 4539273****Date:05/12/2019****Subject Name: Production Planning and Control****Time:10:30 AM TO 01:30 PM****Total Marks: 70****Instructions:**

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

<b>Q. No.</b>	<b>Question Text and Description</b>	<b>Marks</b>
<b>Q.1</b>	<b>Briefly explain the following terms</b> (a) Production System (b) Master production schedule (MPS) (c) Subsidiary order (d) Preventive maintenance (e) Bill of materials (BOM) (f) Design capacity (g) Material handling	<b>14</b>
<b>Q.2</b>	(a) Explain the importance of Production Planning and Control. (b) Explain the various types of Production System.	<b>07</b> <b>07</b>
<b>OR</b>		
	(b) Explain the various Stages of Production Planning and Control.	<b>07</b>
<b>Q.3</b>	(a) What is Aggregate Planning? List the Steps in Developing an Aggregate Plan. (b) Discuss material handling principles and classify material handling equipment.	<b>07</b> <b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) What is layout planning? Explain the Facility Layout Objective. (b) Define Routing and explain the Techniques of Routing in Production Planning and Control.	<b>07</b> <b>07</b>
<b>Q.4</b>	(a) Explain the Principles and Types of Scheduling in brief. (b) What is the Material Requirement Planning (MRP)? Explain the objectives of the MRP in brief.	<b>07</b> <b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) What is meant by maintenance management? Explain the Objectives of maintenance in brief. (b) What is safety audit? What is the need of safety audit?	<b>07</b> <b>07</b>

**Q.5**

**CASE STUDY:**

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 reshipe 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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