

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (NEW) EXAMINATION – SUMMER 2021****Subject Code:2180207****Date:03/08/2021****Subject Name:Applied Industrial Engineering In Automobile****Time:02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

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

		MARKS	
Q.1	(a) Write three objectives of Production, Planning and Control.	03	
	(b) Explain Sales Forecasting with suitable example.	04	
	(c) Define Productivity. Discuss factors affecting productivity.	07	
Q.2	(a) Distinguish between quality assurance and quality control.	03	
	(b) Describe about therbligs along with their symbols.	04	
	(c) Describe about Man-machine Chart and Multiple activity chart with its industrial applications.	07	
OR			
Q.3	(c) What is SWOT analysis and why is it required?	07	
	(a) Differentiate between control charts for variables and attributes.	03	
	(b) Describe Scatter Diagram with suitable example.	04	
Q.3	(c) Explain Six sigma programs towards zero defects.	07	
	OR		
	Q.3	(a) Define: 1) Basic Time 2) Normal Time 3) Observed Time	03
(b) What is Economic Order Quantity?		04	
(c) Explain cost of quality and discuss appraisal and failure cost.		07	
Q.4	(a) State use of PDCA for continues improvement tool.	03	
	(b) Explain about Tender Methods of Purchasing system.	04	
	(c) Write Short Note on Total Quality Management.	07	
OR			
Q.4	(a) Explain the use of ‘String diagram’ in method study.	03	
	(b) Define: Poka yoke, Kaizen, Zero Defect and Benchmarking.	04	
	(c) Describe Just in Time concept along with advantages and disadvantages of JIT.	07	
Q.5	(a) Discuss formulation of Linear Programming.	03	
	(b) What are the limitations of Operation Research?	04	
	(c) A firm produces three products P, Q and R, each of which need to be processed in three departments, milling, grinding, and packaging. Each unit of product P requires four, five, and three hours in each of the three departments. Likewise, product Q requires eight, five and five hours, while product R requires two, five, and six hours in the three departments respectively. Everyday 96,108, and 150 hours are available in the three departments. The unit contribution of the products P, Q and R is Rs 6, Rs12, and Rs 8 respectively. Formulate the given problem as an LPP and find the solution by simplex method.	07	
OR			
Q.5	(a) Differentiate between CPM and PERT.	03	
	(b) Illustrate North west corner method with suitable example	04	
	(c) Explain Critical Path Method (CPM) with suitable example.	07	
