# GUJARAT TECHNOLOGICAL UNIVERSITY
### BE - SEMESTER– VIII (NEW) EXAMINATION – WINTER 2021

**Subject Code:2180207**                                    **Date:23/11/2021**
**Subject Name:Applied Industrial Engineering in Automobile**
**Time:10:30 AM TO 01:00 PM**                        **Total Marks: 70**
**Instructions:**
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

                                                                                          **MARKS**

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|---|---|---|---|
| **Q.1** | **(a)** | Define Production, Planning and Control. | **03** |
| | **(b)** | Differentiate between Method Study & Work Measurement. | **04** |
| | **(c)** | What are the drivers of Quality and explain it? | **07** |
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| **Q.2** | **(a)** | Describe Operation Process Chart with suitable example. | **03** |
| | **(b)** | Define Productivity. Discuss factors affecting productivity. | **04** |
| | **(c)** | What is Therbligs? Explain therbligs in technical aspects with their symbols. | **07** |
| | | **OR** | |
| | **(c)** | What is SWOT Analysis and why is it required? | **07** |
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| **Q.3** | **(a)** | Define Quality in terms of three Quality Gurus. | **03** |
| | **(b)** | Explain four different types of Customers. | **04** |
| | **(c)** | Explain 5'S Techniques with reference to quality. | **07** |
| | | **OR** | |
| **Q.3** | **(a)** | Discuss the benefits of Quality Management. | **03** |
| | **(b)** | Discuss principle of Deming for Total Quality Management. | **04** |
| | **(c)** | Illustrate "Ishikawa Diagram" in context to automobile industries. | **07** |
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| **Q.4** | **(a)** | State benefits of implementing ISO 14000 in an organization. | **03** |
| | **(b)** | Describe Vision and Mission statements of an organization. | **04** |
| | **(c)** | Write short note of ISO: 9000. | **07** |
| | | **OR** | |
| **Q.4** | **(a)** | Explain the concept of 6σ in brief and its importance. | **03** |
| | **(b)** | Explain following terms:<br>(1) Bathtub Curve, (2) MTTF, (3) MTBF, (4) MTTR. | **04** |
| | **(c)** | Describe the Failure Mode and Effect Analysis (FMEA) with suitable example along with its advantages. | **07** |
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| **Q.5** | **(a)** | Define: (1) PERT (2) CPM (3) Linear Programming. | **03** |
| | **(b)** | Describe concept of Just in Time for manufacturing. | **04** |
| | **(c)** | Explain North West Corner Method with suitable example. | **07** |
| | | **OR** | |
| **Q.5** | **(a)** | Explain Economic Order Quantity (EOQ) models. | **03** |
| | **(b)** | What are the limitations of Operation Research? | **04** |
| | **(c)** | Explain Least Count Method with suitable example. | **07** |

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