

Name of Programme: ME

Name of Course: Industrial Engineering and Quality Control (SEM -VI 2024-25)

Course Outcome: Apply work study technique to optimize manufacturing process.

### Assignment –I

- 1. State objectives and procedure of method study
- List the process charts used in data recording and state the importance of each chart. Also explain the symbols used in process chart.
- 3. Draw outline process chart to replace battery in a car.
- 4. Write short notes on micro-motion study and therbligs.
- 5. Explain string diagram with neat sketch.
- 6. State significance of time study along with the procedure and also list the time study equipment and its uses.
- 7. Write a short note on standard time and allowances considered while calculating it.



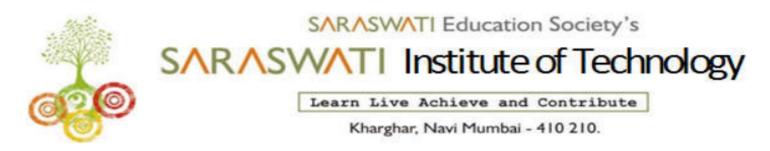
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Course Outcome: Prepare the detailed sequence of operations for manufacturing of component.

# Assignment –II

- 1) Define process planning and explain the steps involved in process planning.
- 2) Explain factors affecting the process planning
- 3) State importance of operation sheet and its role in improving process planning.
- 4) Explain the concept of line balancing. State its importance and objectives.
- 5) Short note on SCM and mention objectives and functions of it.
- 6) Explain CPM and its application related to project completion.



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Course Outcome: Apply Ergonomic principle for designing simple mechanical component.

### Assignment –III

- 1) Define and explain concept and need of ergonomics.
- 2) Explain Man-machine relationship.
- 3) Define anthropometry, state principles in application of anthropometric data and steps to apply it.
- 4) State the use of ergonomics in design of controls.
- 5) Explain types of display with neat sketch
- 6) Explain compatibility in design of control members



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Course Outcome: Interpret the data obtain from different quality control processes.

### Assignment –IV

- 1) State the principles of TQM
- 2) Explain statistical meaning and methodology of six-sigma.
- 3) Shortnotes on i)kaizen ii) poka-yoke iii) 5-s technique.
- 4) Explain various Q-C tools in details.
- 5) State importance and limitations of ISO 9000, ISO-14000.
- 6) Explain cost of quality, value of quality and optimum quality using graph.
- 7) Define inspection and explain role of quality control inspector



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Course Outcome: Interpret the control chart for variable and attribute data.

## Assignment – V

- 1) Explain SQC in detail along with its importance.
- 2) Define and classify Quality control charts in detail.
- 3) Define process capability and state how it is achieved.
- 4) Enlist the types of sampling plan.
- 5) State merits and demerits of sampling methods revised
- 6) Enlist the types of sampling plan
- 7) State merits and demerits of sampling methods.