

## IE 399 – Summer Practice I

**Effectiveness and clarity of the report (5 Points):** The report should be a self-contained report in essay format and should demonstrate the ability to communicate technical content effectively.

### Report Content (95 Points)

**Part 1.** (5 Points) Fill out the Company Identity Card.

**Part 2.** (45 Points) Write a report of maximum eight pages about the company and the production system. This part should include the following:

- Company Information (4 Points): Provide general Information about the company: ownership, sector, products, production capacity, sales volume, market shares and competitors, suppliers and customers.
- Organization (9 Points):
  - Description of the organization and the organization chart (2 Points)
  - Roles of Industrial Engineers in the organization (7 Points)
- Analysis of the Production System (16 Points)
  - Major components of the production system, (marketing, manufacturing, finance, purchasing, sales, etc.) (4 Points)
  - Classify the production system: Identify whether it has a continuous or discrete production; classify the product in terms of ETO, ATO, MTO, or MTS; provide a blueprint or your own sketch of the layout and show the flow of one product on the layout. (12 Points)
- Process Analysis (16 Points):
  - Prepare a process map for one of the major products or service OR a value stream map for the whole process.
  - If a process map is generated, identify productive and non-productive elements and elaborate on the efficiency of the process by supporting your analysis with data. If a value stream map is generated, determine the value-added and non-value-added times and elaborate on the efficiency of the process by supporting your analysis with data.

**Part 3.** (40 Points) Analyze an “activity” that you are interested in and write a free form essay of maximum five pages that describes this activity in details. **You must provide and interpret data** to support your analysis and generate relevant performance measures. An activity can be a manufacturing or service process, an operation, information flow, a decision-making process, etc. Data collection and interpretation is a crucial component for this part, therefore students should analyze an “activity” that they can collect or obtain relevant data.

Grading: 20 Points for “Quality of Analysis” and 20 Points for “Data Analysis and Interpretation”.

**Part 4.** (5 Points) Reflect on your summer practice experience and (i) elaborate on the importance of professional and ethical responsibility. Discuss specific instances where you or other personnel faced ethical dilemmas or had to demonstrate professional behavior. (ii) Elaborate on cultural diversity and evaluate the diversity of the workforce at the company considering various dimensions such as age, gender, race, nationality, religion, language, physical and mental ability, sexual orientation. (iii) Explain how these experiences shape your understanding of professional and ethical responsibility, and having equality in a workplace. Consider the impact that adherence to these standards have on the work environment, team dynamics, and interactions with colleagues and clients.