**IE 299**

**Content of Industry Training Report**

* Information of training firm:
* Firm’s commercial title and address
* Firm’s brief history that explains the development
* Number of employees (worker, engineer, administrative staff, etc.)
* Manufactured goods, annual production capacity, capacity usage rates, main raw materials, material supply methods
* Amount of annual production, market share and target markets
* Draw the firm’s organizational chart and define each department’s authority and responsibility.
* Show the facility layout of the firm (place in the region) on drawing (can be given as appendix). Evaluate that layout in terms of proximity to raw materials and market. Discuss the suitability of facility’s location according to the factors of site selection for the factory.
* What are the goods that the firm manufactures? Do the firm manufacture for internal market or foreign market? If the firm exports, specify the value of export in the last three years and exporting countries.
* What are the raw materials that the firm uses for production? From where the firm supply that raw materials?
* In which production system the firm processes? Explain the product demand, machine equipment, amount of production, types of products and recurring transactions.
* Explain the flow of materials (Examine the steps from raw materials to the final good).
* Specify how the information flows between departments and how the information obtained is used during the decision making process. Draw and explain official communication of information between subsystems of the firm and information flow charts.
* Explain the personnel recruitment and on-the-job training. What are the tests or approaches for the personnel recruitment?
* Explain the job evaluation and compensation system of the firm. Does the firm have performance evaluation system? If yes, how that evaluation is reflected to the salary review?
* Explain and discuss the implementation of operations research techniques. Define and solve a mathematical model that will solve a problem in the firm by using Excel Solver.
* Explain the computer infrastructure, computer utilized areas and software used and gives examples to the software. Examine that whether any enterprise resource planning programme is used or not.
* How is the cost calculated in the firm? Show the unit cost calculation for one unit product.
* Specify the number of industrial engineers in the firm and their tasks.
* Examine and evaluate the quality control policy, quality standards and quality control methods.
* Examine and make a recommendation for a special problem you observed in the firm from point of view of Industrial Engineering
* Evaluate the firm in terms of occupational health and safety. If there are elements preventing workers’ motivation, make a recommendation for adjustment.
* Which investments do the firm plan and what are the factors that are considered while planning these investments? Explain.
* Evaluate the firm in terms of ergonomic suitability, and make recommendations for defects you realize.
* Evaluate your training in general. Write the challenges you faced, responsibilities you are given, and how the firm made use of your recommendations.

**IE 399**

**Content of Training Report**

* Information of training firm:
* Firm’s commercial title and address
* Firm’s brief history that explains the development
* Number of employees (worker, engineer, administrative staff, etc.)
* Manufactured goods, annual production capacity, capacity usage rates, main raw materials, material supply methods
* Amount of annual production, market share and target markets
* Draw the firm’s organization scheme and define each department’s authority and responsibility.
* Explain the flow of materials (Examine the steps from raw materials to the final good).
* Show the facility layout of the firm (place in the region) on drawing (can be given as appendix). Evaluate that layout terms of proximity to raw materials and market. Discuss the suitability of facility’s location to the factors of site selection for the factory.
* What are the goods that the firm manufactures? Do the firm manufacture for internal market or foreign market? If the firm exports, specify the value of export in the last three years and exporting countries.
* What are the raw materials that the firm uses for production? From where the firm supply that raw materials?
* How are production planning and control, capacity planning, inventory planning and control and work schedule done? For these works, which softwares or methods are used? Explain in detail. Also, prepare 4 weeks MRP Programme for one product or sub-material that you choose.
* In which production system the firm implements? Explain the product demand, machine equipment, amount of production, types of products and recurring transactions.
* Create a product tree for any final product. Calculate the amount of raw material and stock for satisfying demand.
* How is cost calculation done? Show that how does unit cost calculates for one unit.
* Learn how efficiency is measured (labor force/ capital efficiency). Give an example. Make recommendations for increasing the efficiency.
* Examine and evaluate the quality control policy, quality standards and quality control methods.
* Evaluate the firm in terms of worker health and safety. If there are elements that preventing workers’ motivation, make a recommendation for adjustment.
* Do a work study for any workstation where the manual skills are highly used.
* Specify how the information flows between departments and how the information obtained is used during the decision making process. Draw and explain official communication of information between subsystems of the firm and information flow chart.
* Explain the computer infrastructure, computer utilized areas and using softwares and give examples to the softwares. Examine that any enterprise resource planning programme is used or not.
* Explain and discuss the implementation of operations research techniques. Define a mathematical model that will solve a problem in the firm and solve that model by using Cplex.
* Prepare a production plan for 3 months for at least one product by using any operations research or industrial engineering technique.
* What are the investments that the firm plans? And what are the factors that are considered while these investments are planned? Explain.
* Specify the firm in terms of ergonomic suitability, and make a recommendation for defects you realize.
* Define the projects carried out in the firm. Examine in detail one of these projects (Project plan, project team, risk management, resource management, targets, milestones etc.).
* Simulate one department in the firm using Arena Simulation Programme. Specify the encountered defects (queue, bottleneck etc.). Try the alternative scenarios for your solution suggestion.
* Solve any problem in the firm that you observe using by any Industrial Engineering method. And write its benefits if it will be applied by the firm. Evaluate your training in general. Write the challenges you faced, responsibilities you are given, and how the firm made use of your recommendations.