



**OKAN ÜNİVERSİTESİ**  
— İSTANBUL —

**FACULTY OF ENGINEERING  
AND NATURAL SCIENCES**

**INDUSTRIAL ENGINEERING DEPARTMENT**



**a) Internship - I**

- 1) The undermentioned information is given about the company which the internship is done:
  - i) Company name and company address
  - ii) Company progress and company's brief history
  - iii) Number of employees (worker, technician, engineer, administrative staff etc.)
  - iv) Legal structure and legal features of the company
- 2) Product/manufacture information
- 3) Manufacture inputs (raw materials, semi-finished products)
- 4) What is the quantity for the production capacity? Which factors are considered to determine production capacity? What is the quantity for the annual production amount? What is the percentage for the capacity utilization ratio? If the company doesn't operate in full capacity, the reasons should be discussed.
- 5) A flowchart should be constructed which demonstrates all the stages including arrival of raw materials to company and all the processes like handling, assembly, storage etc. required to finish the product.
- 6) The production system and classification of this production system should be explained (determination of the type of the company's production system).
- 7) The company's inventory models should be described.
- 8) The organization chart should be described and according to this chart, the authorization and responsibility for each department should be determined.
- 9) Existing computer infrastructure, computer qualifications, areas which computer is used, the software used should be explained (in detail) and printout templates related to software used should be submitted.
- 10) The problems in computer usage and the plans for the future to solve the computer usage problems should be explained.
- 11) The cost calculations and the unit cost calculation for a specific product should be explained.
- 12) The number and the tasks of employees who are industrial engineers should be stated.
- 13) Overall assessment of the internship should be made, the private cases, problems, deficiencies encountered should be stated and these private cases, problems and deficiencies with the possible reasons should be discussed, the optimizing suggestions if any for these cases, how the company



makes use of the student's knowledge and his/her suggestions, the contribution of this internship to student should be stated.

### ***b) Internship - II***

- 1) The undermentioned information is given about the company which the internship is done:
  - i) Company name and company address
  - ii) Company progress and company's brief history
  - ii) Number of employees (worker, technician, engineer, administrative staff etc.
  - iv) Legal structure and legal features of the company
- 2) What are the company's products? Is the production made for only internal market? If company exports, the statement of both domestic sales amount and abroad sales amount for the last three years (for export, the countries should also be stated) and the statement of the factors that hinder rivalry in external market.
- 3) What are the company's raw materials and semi-finished products? Are these supplied by internal way or from abroad? If company imports, statement for each material's import amount for the last year, the countries for import and the discussion of the reasons for import.
- 4) The role of the company's sector in national economy and the relationship between related sectors should be discussed.
- 5) Discussion of the factors that are considered at the stage of building the facility and the suitability of the location selected for the company with the factors that should be considered in location selection for company.
- 6) The facility layout plan should be drawn; drawing of flowchart in a subsystem of the facility that manufactures product or provides service including manufacture of product or service providing process by depicting locations of workbenches, material handling systems, locations of work in process inventory etc.
- 7) Does the company plan to make capital investment or does it have investment proposals for the current years or for the future years? If there are investment plans, what are they and what are the methods used to determine the optimal investment proposal? Does the company use a method that considers the effect of inflation on investments? Explanation of this subject by giving examples from the previous years' studies.



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- 8) How the production planning and control, capacity planning, inventory planning and control and job scheduling is done in the company? The methods and/or software used for these processes should be explained one by one.
- 9) What is the type of the production of this company? Product demand, machine hardware, production amount, product types and repetitive tasks should be stated.
- 10) How is the product or service demand determined? A demand forecasting method used should be explained.
- 11) Maintenance works should be explained.
- 12) Work study should be done in a workstation in which the majority of the labor is manual.
- 13) Do they study standard time? If they do, the calculation of standard time should be explained, the time elapsed in the processes of at least two types products or two types of semi-finished products should be stated. What are the purposes of standard time study?
- 14) Information flow between departments, the way information received used in decision making processes should be explained. The communication between subsystems should be explained by drawing the information flow charts and diagrams.
- 15) The productivity management applications should be explained, if any.
- 16) The calculation of the unit production cost should be explained and product unit cost of a product should be calculated using a method.
- 17) The quality management policy and the quality management system of the company should be explained.
- 18) The organization chart of the company should be drawn and according to this chart the authorization and responsibility for each department should be determined and discussed.
- 19) What is the quantity for the shifts? The number of employees should be stated with respect to their departments and their tasks.
- 20) The personnel recruitment and in-service training should be explained in details, the tests or approaches in the recruitment policy should be explained.
- 21) The work evaluation system and salary system should be explained. Is a performance evaluation method used? If it is, how does it contribute to salary system?
- 22) A subsection of the company should be examined from ergonomic aspect(factors like illumination, ventilation, heating, noise, humidity, work positions when standing, sitting, carrying or uploading,



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tiredness and tension stem from the production rate, arrangement of work duration and rest duration etc.)

- 23) Are there any occupational illnesses encountered which arise from long term practice in insanitary environments in the company? The occupational safety practices of the company should be explained.
- 24) The application of operations research methods should be explained and discussed. A threemonth master production plan should be prepared by using an operations research method for at least one product.
- 25) The student should describe a problem in the company and should solve the problem using an Industrial Engineering method. The contribution of the application of the solution to company should be stated.
- 26) The overall assessment of the internship should be made. The contribution of this internship to Industrial Engineering education should be stated. Based on the internship experience, the differences between industrial engineering and the other engineering disciplines in production systems from authorization and responsibility aspect.

