

IENG410 / MANE400

REPORT EVALUATION FORM

Student ID Number :
Student Name - Surname :

Evaluator: _____
Date : ____ / ____ / 201__

Note 1: You must answer all Questions and Tasks below. Otherwise *best* answers will be dropped for every missing Q and/or T.

Note 2: If the firm does not provide some of its data or documents, you must assume them and proceed answering.

CHAPTERS	Section Headings	Q / T	Question Description	N	P	M	G	E	Remarks
1. Introduction		Q1	INTRODUCTION						
2. Data about the Company	2.1.	Q2	Title.						
	2.2.		Address and web homepage.						
	2.3.		Brief history of the firm.						
	2.4.		Employment data.						
	2.5.		Approximate annual sales, market share, competitors.						
	2.6.		Main products of the firm and raw materials used.						
3. General Principles of Management and Organization	3.1. Organization of the Company	T1	Provide the Organization Chart of the company (if it is not available prepare it yourself). Explain the relations among the functional units in the chart.						
		Q3	Make a list of IE & MANE (Management Engineers) in the firm. Provide titles & responsibilities.						
		Q4	Prepare a Table showing all engineering (other than IE/MANE) and non-engineering students performing their industrial training in the company. Summarize the "topics" they mainly focus. Include their school departments they study.						
		Q5	Explain the responsibilities, based on their units in the Organization Chart, of all engineer (non-IE/MANE) and non-engineer Managers of the company.						
	3.2. Professional Ethics	Q6	Does the company have a published "code of ethics"? Does the company have an ethical issue reporting procedure within the company? If yes, explain. If no, what can you suggest?						
4. Analysis of Production Systems	4.1. Work Study	T2	Prepare part lists (or ingredients & composition) for two Products or Services						
			Include drawings and all related data.						
			Provide flow process charts for two Products or Services.						
	4.2. Ergonomics	T3	Discuss the working environment problems: heat (cold), humidity, vibration, noise, illumination, ventilation, colors etc. Provide accepted standards for each and discuss how well the conditions fit the standards.						
			Identify stress-causing repetitive or monotonous tasks.						
			Suggest improvements even if they are minor in nature.						
	4.3. Facility Location and Layout	T4	Report types of displays and controls in the workplace. Discuss their designs. Comment on the postures of workers during work. Suggest improvements.						
			What factors were taken into account for present facility location?						
			Explain each of them and indicate their appropriateness.						
	4.4. Environmental Management	T5	Prepare a technical drawing of the block plan of the facility.						
			Discuss activity relationships between departments.						
			What are the types of layout in the facility?						
			Explain their advantages and disadvantages.						
	4.5. Safety	T6	Prepare a scaled detailed layout of a selected department.						
			Discuss the type of the layout used.						
Explain Material Handling equipment used within a selected work place.									
4.6. Energy	Q10	For <u>Manufacturing sector</u> : How are raw materials and finished products transported?							
		For <u>Service sector</u> : What kind of transportation is used to provide services?							
		Estimate and compare Unit Transport cost of a raw material & a finished good.							
4.7. Water consumption	Q11	Discuss the advantages of using automated systems.							
		Discuss the environmental impact of the production processes/services.							
		Provide a list of (potential) pollutants.							
4.8. Environmental Management	Q12	Suggest ways for reducing (potential) environmental hazards.							
		Explain company's environmental management policies and activities.							
		What are the environmental "Laws, Rules & Regulations" related to the company?							
4.9. Safety	Q13	Discuss the safety training received by you and new employees.							
		Is there any possible improvements of safety management in the organization. Explain.							
		What does the company do with waste?							
4.10. Waste Management	Q14	Does the company use renewable energy (solar, wind etc.)? If not, is it possible? Explain.							
		What is the monthly water consumption? Is it possible to decrease it? Explain.							
5. Production Planning and Control Systems	5.1. Forecasting	Q16	Do they keep past Sales/Services data? Do they analyze and use past Sales/Services data in forecasting? If yes, which methods are they using? If no, how do they decide on their Production/Service levels?						
			Obtain or estimate past sales data of a product/service and plot the data on a graph.						
			Determine the patterns that you observe from the graph (trend, seasonality, cycles, irregular/random variations etc) that fits the data.						
5.2. Forecasting	T7	Write the most suitable forecasting model for your data.							
		Use the model and forecast for at least 5 periods ahead. Explain how past data are used in your forecast.							
		Check for errors (MSE) to compare forecasts with actual sales.							

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	5.2. Inventory Systems	Q17	List the different inventory types used in the firm. Why is the firm holding these inventories? Give reasons for each type. Do they use ABC analysis for classification of items? What type of decision making models (EOQ, EPQ, LUC, etc) do they use for inventory management?							
			T8	Apply ABC analysis for at least 15 inventory items, explain each step in detail. Estimate the parameters (holding cost, ordering or set-up cost etc.) of EOQ models applicable to one inventory item in each class (A, B, and C). Determine the EOQ and corresponding cost for each of the three items chosen.						
	5.3. Aggregate Production Planning and Master Scheduling	Q18	Q18	Explain Aggregate Production Planning practices in the company (aggregation planning horizon, aggregation units etc.).						
		T9	T9	Give an example of grouping of Products/Services for Aggregation purpose.						
		Q19	Q19	Explain MPS practices in the company in detail. If there is no MPS practices, explain how do they make their production plans?						
	5.4. Material Requirements Planning	T10	T10	Provide a MPS for a group of Products/Services: Develop MRP schedule for one component/service based on the provided MPS. Provide and explain BOM based on where this selected component/service will be used or placed.						
			Q20	Q20	Is the firm using any kind of MRP technique/software? Explain.					
	5.5. Operations Scheduling	T11	T11	Discuss the types of performance measures (scheduling criteria) used in scheduling. Consider the operations performed on a machine/service station. Determine how they sequence jobs on this machine/station. Explain and provide a related Gantt Chart. Which priority rules (FCFS, LCFS, SPT, DD etc) are used? If any dispatching rule is not used, suggest an appropriate priority rule and implement it on a set of jobs to be scheduled on the machine/service station. Show the schedule on a Gantt Chart.						
	5.6. Quality Engineering	Q21	Q21	Explain responsibilities, activities of quality control department. Describe the tools and techniques used for quality assurance. Discuss or suggest their Total Quality Management practices.						
			Q22	Q22	Which standards are used within the firm's Management System (ISO9000, 14000 etc.)? Explain.					
Q23			Q23	List and explain specific Standards that the Product/Service and Process should conform with.						
T12			T12	Discuss a quality problem, its possible causes and solutions.						
5.7. Project Management	Q24	Q24	Discuss project management practices of the firm.							
5.8. Supply Chain Management	Q25	Q25	Explain the logistic activities of the firm.							
6. Information Systems	6.1. Cost Accounting Systems	Q26	Q26	For what purposes are cost-calculations used?						
	6.2. Investment Analysis	T13	T13	During the last 5 years, what were the major investments made by the company? Make a list. Take one example from the list and provide some numerical details (costs, revenues, life etc). Comment on the consequences of the investment in terms of effects on productivity and revenue (if real data is confidential, estimate them).						
7. Conclusion		Q27	CONCLUSION							
8. Reference List		Q28	REFERENCE LIST (the Reference List must be quoted in the text of the report)							
9. Appendix		Q29	APPENDIX							

Question's TOTAL

Question's average

Tasks TOTAL

Task's average

	IEP	Problem identification.	None	Poor	Medium	Good	Excellent	Remarks	
IE/MANE PROBLEM		Problem definition.							
		Problem formulation (including assumptions and constraints).							
		Development of solution alternatives.							
		Evaluation of alternatives.							
		Selection and proposing a satisfactory solution.							
		Analysis of results and discussion of the proposed solution.							
		IE/MANE PROBLEM Total							
		IE/MANE PROBLEM average							