



**Eastern
Mediterranean
University**

"Virtue, Knowledge, Advancement"

Faculty of Engineering

**Department of
Industrial Engineering**

INDUSTRIAL TRAINING LOG BOOK



Gazimağusa (Famagusta), Turkish Republic of Northern Cyprus

Edited in 2020

Industrial Training Code:	IENG210 <input type="checkbox"/> IENG310 <input type="checkbox"/> IENG410 <input type="checkbox"/> MANE200 <input type="checkbox"/> MANE300 <input type="checkbox"/> MANE400 <input type="checkbox"/>
Period of Training:	From ___/___/202___; To ___/___/202___
Student Name-Surname:	
Student No:	
Grade (S/U):	



2020/560130-2

INTRODUCTION

This Log Book is provided to you to keep a record of the activities of student trainees during their training in your firm. Would you please arrange for the students to make observations in at least five of the following departments in order for their training to have our required coverage: Human Resources/Personnel; Workshop; Inventories; Marketing; Production Plant; Maintenance; Computer Centre; Design Engineering, and if possible, Finance & Accounting, and Purchasing. The Supervisors of the trainees are kindly asked to complete all the information requested in this Log Book and return it to the student in a sealed and stamped envelope.

Thank you for your kind cooperation in this matter.

The Industrial Training Planning Committee

Department of Industrial Engineering
Eastern Mediterranean University
Gazimağusa, Mersin 10 (Turkey)
Turkish Republic of Northern Cyprus
Tel : +90 – 392 - 630 1318
Fax : +90 – 392 - 630 2988
Web: <http://ie.emu.edu.tr>

GİRİŞ

Bu kitapçık staj yapan öğrencilerimizin işyerinde yaptıkları çalışmaların stajyer amirleri tarafından değerlendirilip Bölümümüze gönderilmesi amacıyla hazırlanmıştır. Öğrencinin staj koşullarını yerine getirebilmesi için aşağıdaki bölümlerden en az beşinde gözlem yapmasına izin verilmesini rica ederiz: İnsan Kaynakları/Personel; Atölye; Pazarlama; Üretim; Bakım-Onarım; Bilgisayar Merkezi; Tasarım Mühendisliği; Finans-Muhasebe ve Satınalma. Gerekli bilgilerin doldurulması bu dökümanın kapalı ve mühürlü bir zarf içerisinde öğrenciye verilmesini saygılarımızla rica ederiz.

Öğrencilerimize staj olanağı sağladığımız için teşekkürlerimizi sunarız.

Staj Planlama Komitesi

Endüstri Mühendisliği Bölümü
Doğu Akdeniz Üniversitesi
Gazimağusa
Kuzey Kıbrıs Türk Cumhuriyeti
Tel : 0392 - 630 1318
Faks : 0392 - 630 2988
Web: <http://ie.emu.edu.tr>

INFORMATION - (GENEL BİLGİ)

Name of the Firm : _____
(Firmanın Adı)

Address : _____
(Adresi)

Tel : () _____ ; Fax : () _____

General Manager : _____
(Genel Müdür)

Supervisor Assigned : _____
(Stajyer Amiri)

Supervisor's Title : _____
(Amirin Ünvanı)

To be filled by the Supervisor at the company
(Stajyer Amiri tarafından doldurulacaktır)

Total number of employees in the firm : _____
(İş yerinde toplam çalışan sayısı)

Number of engineers employed in the firm : _____
(İş yerinde çalışan mühendis sayısı)

Number of Industrial Engineers employed in the firm : _____
(İş yerinde çalışan Endüstri Mühendisi sayısı)

I certify that the following record of work is done by the student.

(Bu kitapçıkta belirtilmiş çalışmalar adı geçen öğrenci tarafından yapılmıştır).

Signature :
(İmza)

Date (Tarih) : _____ / _____ / 202__

To the Supervisor at the company
(Stajyer Amirinin dikkatlerine)

Dear Supervisor,

We would like to thank you for the interest you have shown in advising our trainee student. We would like to inform you that there are totally three industrial training programs that must be completed by our students. If our student is performing his/her third training (IENG410/MANE400) with you, then s/he has to prepare an additional report about an industrial/management engineering problem in the company (real, potential or hypothetical). The report should also include the solution by using the methods of the discipline. In this regard, please fill page 7 of this Log Book, related to the problem chosen.

Değerli Stajyer Amiri meslektaşımız,

Stajyer öğrencimize göstereceğiniz ilgiden dolayı DAÜ Endüstri/İşletme Mühendisliği ailesi olarak size şimdiden teşekkür ederiz. Bölümümüz öğrencilerinin üç adet staj yapmaları gerekmektedir. Firmanızda üçüncü stajını (IENG410/MANE400) yapmakta olan öğrencilerimiz, “Endüstri Problemi” olarak adlandırdığımız “işyerinde endüstri/işletme mühendisliğini ilgilendiren bir problemi seçiniz ve buna ilgili mühendislik yöntemlerini kullanarak bir çözüm öneriniz” ile ilgili olarak ek bir rapor daha hazırlamaları gerekmektedir. Bununla ilgili olarak lütfen bu kitapçığın 7. Sayfasını doldurunuz.

To the Student
(Stajyer öğrencinin dikkatine)

Please read and sign below – (Lütfen aşağıyı okuyup imzalayınız)

Declaration of the student

I declare that this is my bonafide (genuine) work carried out during my industrial training program. I further declare that I have not referred to any other industrial training report. Any quoted text from the literature has been duly acknowledged.

DAÜ Endüstri Mühendisliği Bölümü'ne

Tamamlamış olduğum staj raporum kendi özgün çalışmamın bir ürünüdür ve kullanmış olduğum bütün alıntılar, metinde yeri geldikçe atıfta bulunduğum *kaynakça* kısmında listelenmiştir. Raporumda bunlar dışında başka hiçbir kaynaktan alıntı yapmadığımı beyan ederim.

Student's

Name – Surname :

Signature:

Student No. :

Date : _____ / _____ / 202__

INDUSTRIAL TRAINING EVALUATION FORM

(To be filled by the Supervisor at the company - Stajyer Amiri tarafından doldurulacaktır)

1. Student's Name and Surname : _____
(Öğrencinin Adı ve Soyadı)

2. Starting date : _____ / _____ / 202 ____ Completion date : _____ / _____ / 202 ____
(Staja başlama tarihi) (Bitiriş tarihi)

3. Duration of Training : _____ working days.
(Staj Süresi) (iş günü)

4. Student's Evaluation - Öğrencinin Değerlendirilmesi:

	Very Good	Good	Average	Weak	Very Weak
1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. (Mühendislik , fen ve matematik ilkelerini kullanarak karmaşık mühendislik problemlerini belirleme, formüle etme ve çözebilme yeteneği)	O	O	O	O	O
2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors. (Halk sağlığı , güvenliği ve refahı yanında küresel, kültürel, sosyal, çevresel ve ekonomik faktörleri gözetererek bunlara çözümler üretecek mühendislik tasarımlarını yapabilme yeteneği)	O	O	O	O	O
3) an ability to communicate effectively with a range of audiences. (Her kesimden insanlarla etkili iletişim kurabilme yeteneği)	O	O	O	O	O
4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental & societal contexts. (Ürettiği çözümlerin küresel, ekonomik, çevresel ve toplumsal etkilerinin bilincinde olma ve kararlarında etik ve mesleksel sorumluluk ilkelerini gözetebilme yeteneği)	O	O	O	O	O
5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives. (Üyeleriyle birlikte liderlik sağlayan, işbirliği ve kapsayıcı bir ortam oluşturan, hedef belirleyen, işleri planlayan ve saptanmış hedeflere ulaşmayı bilen takımlarda etkili olarak çalışabilme yeteneği)	O	O	O	O	O
6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions. (Sonuca varabilmek için doğru deneyleri geliştirip gerçekleştirebilme, verileri çözümleyip yorumlayabilme ve mühendislik kararları alabilme yeteneği)	O	O	O	O	O
7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies. (Gerektiğinde doğru öğrenme stratejilerini kullanıp yeni bilgiler edinme ve uygulayabilme yeteneği)	O	O	O	O	O

5. General opinion about the student (attitudes, motivation, attendance etc.)

Öğrencimiz hakkında genel görüşleriniz (hal ve tavır, ilgi, devamlılık vs.)

Date : _____ / _____ / 202 ____
(Tarih)

Supervisor's Signature :
(Stajyer Amirinin İmzası) _____

DAY (Gün)	DATE (Tarih)	DEPARTMENT (Bölüm)	BRIEF DESCRIPTION OF TRAINING (Yapılan işin kısa açıklaması)	Approval Dept. Chief (Signature)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

**Signature
and
Stamp
(İmza ve Mühür)**

DAY (Gün)	DATE (Tarih)	DEPARTMENT (Bölüm)	BRIEF DESCRIPTION OF TRAINING (Yapılan işin kısa açıklaması)	Approval Dept. Chief (Signature)
11				
12				
13				
14				
15				
16				
17				
18				
19				
20 ^(*)				

(*) Only for IENG410/MANE400: Completion of the “Engineering Problem” **report** with the Supervisor.
“Mühendislik Problemi” **raporunun** Staj Amiri ile sonlandırılması.

**Signature
and
Stamp
(İmza ve Mühür)**

To the attention of the Supervisor at the company

(Stajyer Amirinin dikkatlerine)

- only for IENG410/MANE400 -

Dear Supervisor,

We would like to thank you again for the effort you have put in our trainee student. Please write your opinion about the selected “Engineering problem”. We would like to remind you that this problem should be prepared and submitted in an additional report.

Değerli Stajyer Amiri meslektaşımız,

Öğrencimize göstermiş olduğunuz ilgiden dolayı size teşekkür borçluyuz. Lütfen seçilen “ Mühendislik Problemi” ile ilgili olarak aşağıdaki bilgileri bizlerle paylaşınız. “Mühendislik Probleminin” ayrı bir rapor olarak hazırlanması gerektiğini hatırlatmak isteriz.

1. Is the selected “Problem” a hypothetical, real, or a potential problem? _____
(Seçilen problem gerçek mi, yoksa teorik veya olası bir problem midir?)

2. How applicable is the proposed solution at your firm? _____
(Önerilen çözümün uygulanabilirliği nedir?)

3. General comments on the selected problem and the student’s contribution.
(Problem ve öğrencinin katkıları hakkındaki genel değerlendirmeniz)

(This part is for the engineers working in Turkey)

Değerli Yönetici/Mühendis meslektaşlarımız:

Sevgili öğrencimiz, lütfen bu sayfayı Yönetici/Mühendis meslektaşlarımızın bilgisine getiriniz.

Müfredatımızda *Seminars on Manufacturing and Service Systems* isimli bir seminer dersimiz bulunmaktadır. Bu dersin amacı son sınıf öğrencilerimizin, imalat ve hizmet sektörlerindeki gerçek Endüstri/İşletme Mühendisliği uygulamaları hakkında bilgi sahibi olmalarıdır.

Dersimiz sadece Bahar dönemlerinde açılmakta ve davet edilen Endüstri/İşletme Mühendisliği veya yakın bir alanda çalışan yönetici/mühendislerin Cuma günleri **İngilizce** olarak verdikleri 1 - 1.5 saatlik seminerler şeklinde yürütülmektedir. Bu sayede öğrencilerimiz değişik sektörlerdeki gerçek Endüstri/İşletme Mühendisliği uygulamalarını örnekleriyle görerek birinci elden öğrenme olanağına sahip olmaktadır. Ayrıca konuklarımız da, hem DAÜ'yü ve Bölümümüzü yakından tanıyabilmekte, hem de haftasonlarını Kıbrıs'ta kısa bir tatil yaparak değerlendirebilmektedirler.

Sizleri de öğrencilerimize seminer vermek üzere DAÜ'ye beklemekteyiz.

* Bu sayfa kitapçıktan koparılacağından istenen bilgileri lütfen eksiksiz olarak doldurunuz.

1) **İngilizce** seminer vermek isteyen Yönetici veya Mühendisler:

1. Adı - Soyadı: Görevi:

Lisans/Y. Lisans alanı:

Önerilen Seminer Konusu:

E-posta:

Cep Tel.:

İş Tel.:

Faks:

Firma Adı:

2. Adı - Soyadı: Görevi:

Lisans/Y. Lisans alanı:

Önerilen Seminer Konusu:

E-posta:

Cep Tel.:

İş Tel.:

Faks:

Firma Adı:

3. Adı - Soyadı: Görevi:

Lisans/Y. Lisans alanı:

Önerilen Seminer Konusu:

E-posta:

Cep Tel.:

İş Tel.:

Faks:

Firma Adı:

2) DAÜ Mezunlarla İletişim ve Kariyer Araştırma (MİKA) Müdürlüğü ile işbirliği yaparak öğrencilerimize firmanızı tanıtmak amacıyla DAÜ'yü ziyaret edebilecekler:

1. Adı - Soyadı: Görevi:
Lisans/Y. Lisans/Doktora Alan(lar)ı:
E-posta: Cep Tel.:
İş Tel.: Faks:
Firma Adı:

2. Adı - Soyadı: Görevi:
Lisans/Y. Lisans/Doktora Alan(lar)ı:
E-posta: Cep Tel.:
İş Tel.: Faks:
Firma Adı:

3) Yukarıdaki madde kapsamında DAÜ'yü ziyaret etme olanağı yok ise, firmanızı tanıtan broşür, katalog, CD v.b. gibi malzemelerin temini için iletişim kurulabilecek kişi:

Adı - Soyadı: Görevi:
E-posta: Cep Tel.:
İş Tel.: Faks:
Firma Adı:

İletişim bilgilerimiz:

Doğu Akdeniz Üniversitesi
Endüstri Mühendisliği Bölümü
Gazimağusa, Kuzey Kıbrıs Türk Cumhuriyeti
Tel : +90 – 392 - 630 1318
Faks : +90 – 392 - 630 2988

Sevgili öğrencimiz, bu sayfa kitapçıktan koparılacağından lütfen aşağıdaki bilgileri yeniden doldurunuz.

Öğrencinin Adı - Soyadı:

Öğrencinin Numarası:

Staj: IENG210 ; IENG310 ; IENG410

MANE200 ; MANE300 ; MANE400

IENG210 / MANE200

REPORT EVALUATION FORM

Student ID Number :

Evaluator: _____

Student Name - Surname :

Date : ____ / ____ / 202__

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 write this in your report, 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	Obtain the Organizational Chart of the company (if not available prepare it yourself) and explain the functions and responsibilities of all units in the chart						
		T2	Provide a list of all the units of the company (units are administrative units, workshops, inventories, and others like maintenance, quality related, power supply, cleaning, etc.). Explain the relations among the functional units in the company						
		Q3	Make a list of IE & MANE (Management Engineers) employed in the firm. Provide titles and responsibilities						
	3.2 Professional Ethics	Q4	Prepare a table showing the functions & responsibilities of Engineers other than IE/MANE						
		Q5	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. Manufacturing Systems	4.1. Manufacturing Engineering	T3	Visit one workshop and follow the path of the product within the workshop. Provide a flow chart on the processes. List the machines used in this workshop.						
		Q6	Explore the relations of this workshop with other units. Relations should include obtaining raw materials and semi-finished goods from previous units and providing semi-finished and finished goods to other units.						
		Q7	Explain the Finished Goods inventory policy of the company.						
	4.2 Waste Management	Q8	What does the company do with waste?						
	4.3 Energy	Q9	Does the company use renewable energy (solar, wind etc.)? If not, is it possible? Explain.						
	4.4 Water consumption	Q10	What is the monthly water consumption? Is it possible to decrease it? Explain.						
5. Administrative Systems	5.1. Administration	T4	Visit an Administrative unit and explain its responsibilities in detail.						
		Q11	Explore the relations of this Administrative unit with all other units. Which decisions are made in the visited Administrative unit?						
6. General opinion	6.1	Q12	What do you like most in the work of the company? Explain.						
	6.2	Q13	What should be improved at the company?						
7. Conclusion		Q14	CONCLUSION						
8. Reference List		Q15	REFERENCE LIST (the Reference List must be quoted in the text of the report)						
9. Appendix		Q16	APPENDIX						
Question's Total									
Question's average									
Tasks Total									
Task's average									

IENG310 / MANE300

REPORT EVALUATION FORM

Student ID Number : _____
 Student Name - Surname : _____

Evaluator: _____

Date : ____ / ____ / 202__

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 write this in your report, assume them and proceed answering.

CHAPTERS	Section Headings	Q/T	Question Description	Grading Scale					Remarks	
				None N	Poor P	Medium M	Good G	Excellent E		
1. Introduction		Q1	INTRODUCTION							
2. Data about the Company	2.1. 2.2. 2.3. 2.4. 2.5. 2.6.	Q2	Title.							
			Address and web homepage.							
			Brief history of the firm.							
			Employment data.							
			Approximate annual sales, market share, competitors.							
			Main products of the firm and raw materials used.							
3. General Principles of Management and Organization	3.1. Management Functions	Q3	What management functions are performed? Discuss. Discuss any organizational problem you observed (or a potential problem)							
		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.							
			Make a list of IE & MANE (Management Engineers) employed in the firm. Provide titles and responsibilities.							
	3.2. Organization of the Company	Q5	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.							
		Q6	Explain the responsibilities, based on their departments in the Organization Chart, of all engineer (non-IE/MANE) and non-engineer Managers in the company.							
		Q7	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. Manufacturing Systems	4.1. Manufacturing Engineering	Q8	What types of manufacturing processes exist? Briefly explain each.							
		T2	Select one process, compute and comment on "productivity" for a time period.							
		T3	List at least two machines used in production. Add their details.							
5. Analysis of Production Systems	5.1. Production Environment	Q9	Indicate the current production systems used in the firm. Discuss the reasons of the selection and state its advantages and disadvantages.							
		5.2. Safety	Q10	List and explain special "hazards" associated with production. If there is not any, what are the potential hazards in similar industries? Briefly explain the "safety rules and regulations" related with this industry.						
	Q11		Discuss the procedure applied in the company related with "occupational accidents".							
	Q12		Discuss the safety training received by you and new employees. Is there any possible improvements of safety management in the organization. Explain.							
	5.3. Work Study	Q13	Discuss productivity ratios. Any critical items (material, capital, labor)?							
		T4	Prepare part lists (or ingredients & composition) for two products. Provide flow process charts for two (sub)assemblies.							
			Are the standard times determined in the firm?							
		Q14	What are the purposes of using standard times in the firm? Supply data for two products. Explain how are they calculated.							
		Q15	Explain how <i>unit costs</i> are determined in general.							
	5.4. Job Evaluation and Wage Incentives	T5	Choose a product and explain in detail how its unit cost is calculated. (You do not have to use real data of the firm). How are the indirect costs (overheads) added to the unit cost?							
			How are the indirect costs (overheads) added to the unit cost?							
		Q16	Is job evaluation used in the firm? Explain how. If not used, discuss the potential benefits of its implementation. How are the jobs classified? Fully explain.							
	5.5. Plant Location and Layout	Q17	Provide job descriptions: One management and one skilled worker.							
			On what basis are the wages determined?							
			Is the firm using any kind of incentive system? Give some examples and discuss the effect on labor. Discuss how "labor productivity" could be improved.							
5.6. Environmental Management	Q19	What factors were taken into account for present plant location?								
		What are the types of layout in the plant?								
		Explain material handling equipment used within a selected work place. How are raw materials and finished products transported?								
5.7. Waste	Q20	Discuss the environmental impact of the products produced. Provide a list of (potential) pollutants. Suggest ways for reducing (potential) environmental hazards. Explain company's environmental management policies.								
		What does the company do with waste?								
		What is the monthly water consumption? Is it possible to decrease it? Explain.								
5.8. Energy	Q21	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.								
		Describe the information flow between the departments.								
5.9. Water consumption	Q22	Specify information flow within a department.								
		List all computer softwares used in each department and explain the reasons they are used for. Comment on the effectiveness of the software usage.								
		What is the main purpose of cost accounting analysis? Which department or person is responsible for the cost accounting system? How are costs calculated in general? In which monetary currency? Are they inflation-adjusted? Explain.								
6. Information Systems	6.1. Data Management	Q26	Describe the information flow between the departments.							
T6		Specify information flow within a department.								
6.2. Cost Accounting Systems	Q27	List all computer softwares used in each department and explain the reasons they are used for. Comment on the effectiveness of the software usage.								
		What is the main purpose of cost accounting analysis? Which department or person is responsible for the cost accounting system? How are costs calculated in general? In which monetary currency? Are they inflation-adjusted? Explain.								
7. Conclusion		Q28	CONCLUSION							
8. Reference List (must be quoted in the text of the report)				Question's Total						
9. Appendix				Question's average						
				Tasks Total						
				Task's average						

IENG410 / MANE400

REPORT EVALUATION FORM

Student ID Number :

Evaluator: _____

Student Name - Surname :

Date : ____ / ____ / 202__

**** Attention:** This training requires **submission of 2 Reports**. See the bottom of next page for the second report (**IE/MANE PROBLEM**)

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.						
	3.2. Professional Ethics	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.						
		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.						
	4.3. Facility Location and Layout	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?						
	4.3. Facility Location and Layout	Q9	Explain their advantages and disadvantages.						
			Prepare a scaled detailed layout of a selected department.						
			Discuss the type of the layout used.						
4.4. Environmental Management	Q10	Explain Material Handling equipment used within a selected work place.							
		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?							
4.4. Environmental Management	Q11	Estimate and compare Unit Transport cost of a raw material & a finished good.							
		Discuss the advantages of using automated systems.							
		Discuss the environmental impact of the production processes/services.							
4.4. Environmental Management	Q12	Provide a list of (potential) pollutants.							
		Suggest ways for reducing (potential) environmental hazards.							
		Explain company's environmental management policies and activities.							
4.4. Environmental Management	Q13	What are the environmental "Laws, Rules & Regulations" related to the company?							
		Discuss the safety training received by you and new employees.							
		Is there any possible improvements of safety management in the organization. Explain.							
4.5 Safety	Q14	What does the company do with waste?							
4.5 Waste Management	Q15	Does the company use renewable energy (solar, wind etc.)? If not, is it possible? Explain.							
4.6 Energy	Q16	What is the monthly water consumption? Is it possible to decrease it? Explain.							
4.7 Water consumption	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?							
5. Production Planning and Control Systems		T7	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. Production Planning and Control Systems	5.1. 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.						
5. Production Planning and Control Systems	5.1. Forecasting	T7	Check for errors (MSE) to compare forecasts with actual sales.						

CHAPTERS	Section Headings	Q / T	Question Description	N	P	M	G	E	Remarks	
	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.						
				Q18	Explain Aggregate Production Planning practices in the company (aggregation planning horizon, aggregation units etc.).					
	5.3. Aggregate Production Planning and Master Scheduling	T9	Give an example of grouping of Products/Services for Aggregation purpose.							
		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	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	Is the firm using any kind of MRP technique/software? Explain.						
		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	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	Which standards are used within the firm's Management System (ISO9000, 14000 etc.)? Explain.						
		Q23	List and explain specific Standards that the Product/Service and Process should conform with.							
		T12	Discuss a quality problem, its possible causes and solutions.							
5.7. Project Management	Q24	Discuss project management practices of the firm.								
5.8. Supply Chain Management	Q25	Explain the logistic activities of the firm.								
6. Information Systems	6.1. Cost Accounting Systems	Q26	For what purposes are cost-calculations used?							
	6.2. Investment Analysis	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										

Second Report (IE/MANE PROBLEM) :

This is a **separate** Report on the "Engineering Problem" identified.

	Engineering Problem		None	Poor	Medium	Good	Excellent	Remarks	
<p align="center">IE/MANE PROBLEM</p> <p>Find a real or potential or hypothetical IE/MANE related "Engineering Problem" in the company and write a separate Report about it. In this Report you will suggest a solution to this problem based on the methods you have learned in your courses. This report too will have the Coverpage, Table of Contents, Introduction, Conclusion, Reference List etc. Additionally the headings provided at the right should be used.</p>		Problem identification.							
		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							

REPORT EVALUATION FORM
FORMAT

LAYOUT OF THE TEXT		O.K.	NOT
Paper and Printing	The text is typed on only one side of A4-size good quality sheets. The report is submitted in its original copy.		
Margins	All the margins are within their acceptable limits (i.e. left margin>4 cm., other margins>2.5 cm.) The text is justified (i.e. every full line ends at the same point along the page), and nothing appears outside the margins.		
Centering	All materials (figures, tables, etc.) are centered between the text margins.		
Fonts and Spacing	The normal font style used throughout the text is regular, not italic or bold. The font style for the generic headings, chapter titles, sections and subsections is bold. The normal font size is 12-point and same throughout the text. The font size for the Generic Headings or Chapter Titles is 16-point. The Generic Headings and Chapter Titles are centered between the text margins. The font sizes for the Section and Subsection Headings are 14-point and 12-point, respectively. The Section and Subsection Headings are flush left.		
Indentation	The beginning of the second and subsequent paragraphs are indented six to eight spaces.		
Word and Text Division	The words are not divided or hyphenated at the end of lines. At least two lines of a paragraph appear together at the top and bottom of every page.		
Pagination	The page numbers are not typed on the title page and pages facing large illustrations. The lowercase Roman numerals (ii, iii, iv, etc.) are used for the preliminary pages. The Arabic numerals are used for the pages (including references, appendices) rather than preliminary pages. The title page and pages facing large illustrations are counted in the pagination. All page numbers are in the same font and size: within the margin boundaries: and appear in the same location on the page.		
Binding	Secured neatly in a file with synthetic cloth or bound by a spiral spine with synthetic covers.		
TOTAL			

TEXT			
PRELIMINARY PAGES		O.K.	NOT
	The order of items within the preliminary pages is correct (e.g. Title Page, Table of Contents, ...)		
Title Page	The format of the Title Page, including spacing and capitalization, is almost as it is shown in the sample title page.		
Table of Contents	The Table of Contents page appears on a separate page. A generic heading TABLE OF CONTENTS is used in uppercase and centered between the text margins. The listing of actual contents begins begins at least three spaces below the generic heading. Each entry has leader dots which connect it to its page number. Double-space between each entry and single-space within the same caption are used.		
List of Tables / List of Figures	The list of tables and list of figures pages appear on separate pages. A generic heading LIST OF TABLES/LIST OF FIGURES is used in uppercase and centered between the text margins. The tables/figures appear ordered numerically. The table/figure numbers are placed in a column flush left under the heading TABLE/FIGURE. The page numbers for the tables/figures are listed flush right under the heading "Page". The table titles/figure captions begin two spaces after the period following the table number. The table titles/figure captions agree exactly with the wording of the titles/captions as they appear in the text. The table titles/figure captions are capitalized in headline style used throughout the report. The first letter of all other table titles/figure captions and any runover lines, if any, are aligned with the first letter of the title/caption following the first table. Each entry has leader dots which connect it to its page number. Double-space between each entry of tables/figures and single-space within the table heading/figure caption are used.		
TOTAL			

MAIN TEXT		O.K.	NOT
	The order of items within the main text is correct (e.g., Introduction, Body, and Conclusion).		
Introduction	A proper introduction (which is the first chapter) appears on a separate page. A generic heading CHAPTER I is used in uppercase and centered between the text margins. The introduction has a title INTRODUCTION, centered in uppercase within the text margins.		
Body	Each chapter with a generic heading, used in uppercase and centered between the text margins, begins on a separate page. Each chapter has a title, which describes the content of the chapter, centered in uppercase within the text margins.		
Sectioning	Proper sectioning is made for the questions asked. The presentation of sections and subsections are continuous within a chapter. The section and subsection headings are numbered consecutively (e.g. 2.1, 2.1.2, etc.). The section and subsection headings are placed flush with the left margin. The section and subsection headings have the same wording as the entries in the table of contents. The section and subsection headings are in lowercase with the initial letter in each major word capitalized. The section and subsection headings have no other text on the same line. The section and subsection headings have no punctuation after them.		
Illustrative Material	Illustrations are numbered consecutively, and placed as close as possible to their first references in the text. Illustrations have headings and captions which are prepared in the same typeface and point size used for the text. Figure (or Table) numbers and captions are placed and centered at the bottom (above the top line) of the illustration. Illustrations that are too large (e.g. as in the case of large maps) are folded and inserted in an envelope.		
Formulas	Formulas are centered within the text margins, and are numbered consecutively, and the corresponding number is placed on the right-hand side, which is right-justified, and in parenthesis.		
Conclusion	A proper conclusion (which emphasizes the most important points drawn from the report's main body, the conclusions of the report, and recommendations, if any) appears on a separate page. A generic heading CONCLUSION is used in uppercase and centered between the text margins.		
TOTAL			

BACK MATTER		O.K.	NOT
	The order of items within the back matter is correct (e.g., References, Glossary, and Appendix).		
References or Bibliography	A references of bibliography page appears on a separate page. A generic heading REFERENCES or BIBLIOGRAPHY is used in uppercase and centered between the text margins. Each entry in the list of references or bibliographies are single-spaced with double spacing between entries.		
Glossary	A glossary page appears on a separate page. A generic heading GLOSSARY is used in uppercase and centered between the text margins. The terms and phrases are arranged alphabetically and flushed left. The first letter of all words constituting a term is capitalized. Two to four spaces are left between the longest term (or phrase) and its definition. The first letter of all other definitions and any runover lines (if a definition extends to more than one line) are aligned with the first letter of the definition following the longest term (or phrase). Double-space between terms and single-space within the term definition are used.		
Appendix	Each appendix is arranged in the sequence in which each is referred to in the report. Each appendix is given a generic heading with an identifying letter (Appendix A, Appendix B, etc.) centered between the text margins and a title centered in uppercase between the text margins. Each appendix has page numbers written in the same typeface and size used for pagination. Each appendix is listed in the table of contents as a subdivision under the heading APPENDICES. The photocopied material in an appendix, if any, is of letter quality and given a page number.		
TOTAL			

LANGUAGE		O.K.	NOT
	English throughout.		
	Comprehensible and with good grammar.		
	No (or a small number of) spelling mistakes.		
TOTAL			