

Guru Nanak Dev Engineering College, Ludhiana			
Department Of Mechanical and Production Engineering			
Program	B.Tech.	Semester	6th
Subject Code	OEME-106	Subject Title	Industrial Engineering
Mid Semester TestNo.	2	Course Coordinator	Dr. Harpuneet Singh Pf. Gurwant Singh Gill
Max. Marks	24	Time Duration	1 hour 30 minutes
Date of MST	14/05/2025	Roll Number	2203893

Note: Attempt all questions

Q. No.	Question	COs, RBT level	Marks
Q1	Explain Value Engineering.	CO6, L2	2
Q2	Define Quality Circles.	CO4, L2	2
Q3	Explain in detail the use of anthropometric data in engineering design.	CO3, L3	4
Q4	Write a short note on a) Team Building b) Just-in-Time	CO4, L2	4
Q5	Explain in detail the effect of Heat, Light, and Humidity on the Human Work Performance.	CO3, L5	4
Q6	Explain Six Sigma DMAIC approach with various tools of its phases.	CO6, L5	8

**Course Outcomes (CO)** Students will be able to

1	Know the functions and required qualities of an Industrial Engineer.
2	Apply work sampling and time study techniques for productivity improvement.
3	Identify and analyze the effect of working environment on worker's health.
4	Learn about relevant management concepts.
5	Decide and Manage the plant location and layout effectively.
6	Use modern techniques of industrial engineering for betterment of industry.

RBT Classification	Lower Order Thinking Levels (LOTS)			Higher Order Thinking Levels (HOTS)		
	L1	L2	L3	L4	L5	L6
RBT Level Number						
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating



[Total No. of Questions: 09]

[Total No. of Pages: 02]

Uni. Roll No. 2203893

Program/Course: B.Tech.

Sem: 6<sup>th</sup>

Name of Subject: Industrial Engineering

Subject Code: OEME-106

Paper ID:17152

Time Allowed: 03 Hours

Max. Marks: 60

**NOTE:**

- 1) Parts A and B are compulsory
- 2) Part-C has Two Questions Q8 and Q9. Both are compulsory, but with internal choice.
- 3) Any missing data may be assumed appropriately.

**Section-A**

**[Marks: 02each]**

**Q.1.**

- (a) Explain objectives of an industrial engineering.
- (b) Discuss the role of industrial engineer in industry.
- (c) Explain process layout with suitable example.
- (d) How productivity differs from production.
- (e) Explain concept of benchmarking.
- (f) Explain in detail the Job Enlargement and Job Enrichment.

**Section-B**

**[Marks: 04each]**

- Q.2.** Explain the effect of heat and vibration on human performance.
- Q.3.** Explain method study and its use.
- Q.4.** What is combined layout, discuss two cases where combined layout is required?
- Q.5.** Discuss various factors which affect the Plant Location.
- Q.6.** Explain concept of Total Quality Management.
- Q.7.** Define Reward and recognition and give its types.

**Section-C**

**[Marks:12each]**

**Q.8.**What are main symbols that are used for macro-motion study? Discuss any two process charts by using these symbols.

**OR**

Discuss various methods to improve Total Employees Involvement.

**Q.9.**Explain Six Sigma DMAIC approach with various tools used in each phase.

**OR**

Write short note on

- (a) Failure mode effect analysis
- (b) Enterprise resource planning

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Guru Nanak Dev Engineering College, Ludhiana			
Department Of Mechanical and Production Engineering			
Program	B.Tech.	Semester	6th
Subject Code	OEME-106	Subject Title	Industrial Engineering
Mid Semester Test No.	1	Course Coordinator	Harpuneet Singh
Max. Marks	24	Time Duration	1 hour 30 minutes
Date of MST	19-03-2025	Roll Number	2203893

Note: Attempt all questions

Q. No.	Question	COs, RBT level	Marks
Q1	Explain functions of Industrial Engineering.	CO1, L1	2
Q2	Compare Product and Process Layout.	CO5, L1	2
Q3	Explain the factors affecting the productivity of an organization.	CO2, L4	4
Q4	What you understand by work study and explain its use.	CO2,4, L3	4
Q5	Explain in detail the Job Enlargement and Job Enrichment.	CO4, L1	4
Q6	Explain various factors affecting the plant location.	CO5, L6	8

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