



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai

Accredited by NAAC-UGC with 'A++' Grade (Cycle III) &

Accredited by NBA (B.E.-CSE, EEE, ECE, Mech & B.Tech IT)

COIMBATORE-641 035, TAMIL NADU



Reg. No:

B.E/B.Tech- Internal Assessment – III
Academic Year 2024-2025 (EVEN Semester)
Sixth Semester
(Common to all branches)
19MEO303 - INDUSTRIAL SAFETY

A

Time: 1 1/2 Hours

Maximum Marks: 50

Answer All Questions

		CO	Blooms
1.	What is the role of government agencies in safety education and training? Mention two key responsibilities. (GATE 2021&GATE 2023)	CO 4	REM
2.	Analyze two future directions for ergonomics.	CO 4	ANA
3.	What are Competence Building Techniques (CBT)?	CO 5	REM
4.	List any three workplace risk factors that contribute to musculoskeletal disorders (MSDs). (GATE 2020)	CO 5	UND
5.	Apply the concept of motivation to improve employee participation in safety programs.	CO 5	APP

PART – B (2*13=26 Marks) & (1*14=14 Marks)

			CO	Blooms
6.	(a) Explain the history of ergonomics and its evolution in modern industries.	13	CO 4	REM
	(or)			
	(b) Conduct a case study on the impact of ergonomics on workplace productivity.	13	CO 4	ANA
7.	(a) Define Competence Building Techniques and explain their role in safety training.	13	CO 5	REM
	(or)			
	(b) Compare different methods of promoting safe practices in industries.	13	CO 5	ANA
8.	(a) A medium-scale manufacturing firm is reporting increased complaints of shoulder pain, eye strain, and fatigue among its inspection-line workers. Most workstations are at fixed height and lighting is fluorescent overhead. (GATE 2020 & GATE 2022)	14	CO 4	APP
	(or)			
	(b) A steel foundry with accident records wants to implement a reward-based system to promote safety reporting and hazard identification. (GATE 2022 & GATE 2023)	14	CO 5	APP

Bloom's Taxonomy: REM – Remember UND – Understand APP– Apply ANA– Analyze

EVA – Evaluate (R) – Create

Faculty in-charge

Teaching Coordinator

HoD /Mech

(M. Balaji)

V. G.



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19MEO303 - INDUSTRIAL SAFETY

B

Time: 1^{1/2} Hours

Maximum Marks: 50

Answer All Questions

			CO	Blooms
1.	Define ergonomics and mention any two of its areas of application in the work system. (GATE 2021)		CO 4	UND
2.	Explain the relationship between ergonomics and workplace productivity.		CO 4	UND
3.	Analyze the impact of government and private consultancy agencies on safety education.		CO 5	ANA
4.	Compare the effectiveness of different safety training methods.		CO 5	ANA
5.	How do safety posters and safety displays help in promoting safe practices? (GATE 2023)		CO 5	UND
PART – B (2*13=26 Marks) & (1*14=14 Marks)				
			CO	Blooms
6.	(a) Define musculoskeletal disorders (MSDs) and explain their common causes.	13	CO 4	REM
	(or)			
	(b) Apply ergonomics principles to improve the working conditions of a factory worker.	13	CO 4	APP
7.	(a) Explain how safety posters, safety displays, and campaigns contribute to awareness.	13	CO 5	UND
	(or)			
	(b) Conduct a case study on a successful workplace safety training program.	13	CO 5	ANA
8.	(a) A paint factory with frequent minor incidents (chemical splashes, slips, and minor fires) wants to launch a one-month safety campaign. (GATE 2023)	14	CO 4	APP
	(or)			
	(b) In a fireworks manufacturing unit, most workers have low literacy levels and face recurring minor injuries. The management wants to implement a CBT based safety module. (GATE 2023)	14	CO 5	APP

Bloom's Taxonomy: REM – Remember UND – Understand APP – Apply ANA – Analyze

EVA – Evaluate CBT – Create

Faculty in-charge

Teaching Coordinator

HoD /Mech

(H. Balaji)

Vij.



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Set - (A)

Institution	SNS College of Technology
Branch	Mechanical Engineering
Semester	VI
Course Code/Name	19ME0303 - Industrial Safety
Name of the Faculty	Mr. M. Balaji Ap/Mech

IAE-3 Set-A

S.No	Quality Parameters based on blooms	Grade points (g)	Part	No of Questions(n)	Allotted marks (m)	n*m	Q= n*m*g
1	Remember/ Understand (Level - 1,2)	1	A	03	02	06	06
			B	02	13	26	26
			C				
2	Apply (Level - 3)	2	A	01	02	02	04
			B	02	14	28	56
			C				
3	Analyze (Level - 4)	3	A	01	02	02	06
			B	02	13	26	78
			C				
4	Evaluate (Level-5)	4	A				
			B				
			C				
5	Create (Level -6)	5	A				
			B				
			C				

Quality Index $Q_i = \frac{\sum Q}{\sum (n \times m)} = \frac{176}{90} \Rightarrow 1.88$ - Medium

Mr. M. Balaji
Faculty
(M. Balaji)

Teaching Coordinator
VB.

HoD / Mech
3/5/25



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Set - (B)

Institution	SNS College of Technology
Branch	Mechanical Engineering
Semester	VI
Course Code/Name	19ME0803 - Industrial Safety
Name of the Faculty	Mr. M. Balaji, Ap/mech

IAE-3 - Set - (B)

S.No	Quality Parameters based on blooms	Grade points (g)	Part	No of Questions(n)	Allotted marks (m)	n*m	Q= n*m*g
1	Remember/ Understand (Level - 1,2)	1	A	03	02	06	06
			B	02	13	26	26
			C				
2	Apply (Level - 3)	2	A				
			B	01	13	13	26
			B	02	14	28	56
3	Analyze (Level - 4)	3	A	02	02	04	12
			B	01	13	13	39
			C				
4	Evaluate (Level - 5)	4	A				
			B				
			C				
5	Create (Level - 6)	5	A				
			B				
			C				

Quality Index $Q = \frac{\sum Q}{\sum (n \times m)} = \frac{165}{90} \Rightarrow 1.83$ Medium $\frac{90}{165}$

Faculty

(M. Balaji)

Teaching Coordinator

Vlg

HoD / Mech