



TRADE MARK

LIONTM

Teacher's Lesson Note

(2023-24)

Sub: Strength of Material

Lecturer: Enr. Sushanta Ku. Mohanta

Branch: Mechanical Engg. & Mechanical Engg. (M)

Semester: 3rd. Sem (2022-23)

TEACHERS

LESSON NOTE

Date	Topic	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
1	2	3	4	5	6	7	8
28/8/22	1 st	1 st	SOM	Simple stress & strain	Types of load	Stress & strain, Hook's Law, Young's modulus, Bulk modulus of Rigidity	
28/8/22	2 nd	2 nd				Poisson's ratio, derive the relation between three elastic constants.	
28/8/22	3 rd	3 rd				Principle of Superposition stress in Composite Section	
28/8/22	4 th	4 th				Temp. stress, determine the temp. stress in	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Stress & strain, Hook's Law, Young's modulus.		S. K. Mohanta 11/8/22		
	Bulk modulus of Rigidity Poisson's ratio		S. K. Mohanta 11/8/22	S. K. Mohanta 28/8/22	
	Derive the relation between three elastic constants		S. K. Mohanta 11/8/22		
	Superposition stress in Composite Section, Principle of Superposition stress in Composite Section.		S. K. Mohanta 11/8/22		

TEACHING

Date	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used	
1	2	3	4	5	6	7	8
21/8/22	4 th	1	- do -		Strain energy & resilience		
21/8/22	4 th				Stress due to gradually applied, sudden ly applied & Impact load.		
21/8/22	4 th				Simple Problem solve		
21/8/22	4 th				Simple Problem solve		

LESSON NOTE

9	10	11	12	13	14
Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	Strain energy & Resilience Thermal strain & stress		S. K. Mohan 21/8/22		
	Stress due to gradually applied, suddenly applied & impact load		S. K. Mohan 21/8/22	Mohan 21/8/22	
	Simple Problem solve		S. K. Mohan 21/8/22		
	Simple Problem solve -		S. K. Mohan 21/8/22		

TEO (HEADS)

1	2	3	4	5	6	7	8
Date	Week	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
23/8/23	1 st	1 st		- do -		Simple Problem solve	
24/8/23	2 nd	2 nd				Simple Problem solve Cales test	
25/8/23	3 rd	3 rd		Thin cylinder & spherical shell under internal pressure		Definition of hoop & longitudinal stress, strain	
28/8/23	4 th	4 th				Derivation of hoop stress, longitudinal stress	

LESSON NOTE

9	10	11	12	13	14
Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	Simple Problem solve		S. K. Mohan 23/8/23		
	Simple Problem solve		S. K. Mohan 23/8/23		
	Definition of hoop & longitudinal stress, strain		S. K. Mohan 23/8/23		
	Derivation of hoop stress, longitudinal stress.		S. K. Mohan 23/8/23		

TEA (H.E.R.S)

LESSON NOTE

Date	Period	Week	Subject	Topic (Concept)	Sub-Topic	Learning Activities to be taken up	TLM to be used
22/6/17	2 nd	1 st		- do -		hook strain, longitudinal strain & volumetric strain.	
22/6/17	3 rd					computation of the change in length	
22/6/17	4 th					Change in diameter & volume	
22/6/17	5 th					Solve Problem on above	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	hook strain, longitudinal strain & volumetric strain		S.K. Mohanta 21/9/17		
	computation of the change in length		S.K. Mohanta 21/9/17	S.K. Mohanta 9/9/20	
	Change in Dia & volume		S.K. Mohanta 21/9/17		
	Solve Problem		S.K. Mohanta 21/9/17		

TEACHERS

LESSON NOTE

Date	Week	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
13/9/20	2 nd	1 st		- do -		Determination Resultant stress on oblique plane	
13/9/20	2 nd	1 st				Location of Principal plane	
20/9/20	3 rd	1 st				Computation of Principal stress	
27/9/20	4 th	1 st				Location of Principal plane	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Determination Resultant stress on oblique plane		S.K. Mohanta 13/9/20		
	Location of Principal plane		S.K. Mohanta 13/9/20	S.K. Mohanta 20/9/20	
	Computation of Principal stress		S.K. Mohanta 20/9/20		
	Location of Principal plane		S.K. Mohanta 27/9/20		

TEA (HEDS)

1	2	3	4	5	6	7	8
Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
24/6/23	4th	4th				Computation of Principal stress	
24/6/23	4th	4th				Maxim's shear stress using Mohr's Circle	
29/6/23	4th	4th				Simple Problem solve	
29/6/23	4th	4th				Class test	

LESSON NOTE

9	10	11	12	13	14
Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	Computation of Principal stress		S.K. Mohan 29/9/23		
	Maxim's shear stress using Mohr's Circle		S.K. Mohan 29/9/23	S.K. Mohan 29/9/23	
	Simple Problem solve		S.K. Mohan 29/9/23		
	Class test		S.K. Mohan 29/9/23		

1	2	3	4	5	6	7	8
Date	Week	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
3/10/23		IX		Bending moment & Shear force		Types of beam & load	
3/10/23		IX				Concepts of Shear force	
4/10/23		IX				Concepts of Bending moment	
4/10/23		IX				Shear force & Bending moment diagram	

9	10	11	12	13	14
Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	Types of beam and load		S.K. Mohanta 3/10/23		
	Concept of Shear force		S.K. Mohanta 3/10/23	S.K. Mohanta 4/10/23	
	Concept of Bending moment		S.K. Mohanta 4/10/23		
	Shear force & Bending moment diagram		S.K. Mohanta 4/10/23		

TEACHERS

Date	Week	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
6/10/23	5th	11th		— do —		Salient features illustration in Corn Lever beam.	
6/10/23	5th	11th				Simply supported beam.	
9/10/23	5th	11th				Over hanging beam under point load	
10/10/23	5th	11th				Uniformly distributed load.	

LESSON NOTE

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Salient features illustration in Corn Lever beam.		S. K. Mohanta 6/10/23		
	Simply supported beam		S. K. Mohanta 6/10/23		
	Over hanging beam under point load		S. K. Mohanta 9/10/23		
	Uniformly distributed load.		S. K. Mohanta 10/10/23		

S. K. Mohanta
10/10/23

1	2	3	4	5	6	7	8
Date	Period	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
11/10/23	10th	11th	11th	- do -		Concept of Doubt clearing on some problems	
12/10/23	11th	11th	11th			Class test	
12/10/23	11th	11th	11th			Assumption on the theory of breeding	
18/10/23	11th	11th	11th			Other Assumptions in the breeding theory	

9	10	11	12	13	14
Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the teacher	Signature of the Headmaster	Remarks
	Concept & Doubt clearing on some problems		S.K. Mohan 11/10/23	S.K. Mohan 11/10/23	
	Class test		S.K. Mohan 12/10/23	S.K. Mohan 12/10/23	
	Assumption on the theory of breeding		S.K. Mohan 12/10/23	S.K. Mohan 12/10/23	
	Other Assumptions in the breeding theory		S.K. Mohan 18/10/23	S.K. Mohan 18/10/23	

TEACHERS

LESSON NOTE

1	2	3	4	5	6	7	8
Date	Week	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
20/10/23	11th	11th		- do -		Bending Equation	
20/10/23	11th	11th				Moment of resistance	
21/10/23	11th	11th				Section Modulus	
23/10/23	11th	11th				Neutral axis	

9	10	11	12	13	14
Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	Bending Equation		S.K. Mohanta 20/10/23		
	Moment of resistance		S.K. Mohanta 20/10/23	S.K. Mohanta 21/11/23	
	Section Modulus		S.K. Mohanta 20/10/23		
	Neutral axis		S.K. Mohanta 20/10/23		

TEACHERS

LESSON NOTE

1	2	3	4	5	6	7	8
Date	Weeks	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
06/11/20	1 st	1 st		do-		Solve Simple Problems	
07/11/20	2 nd	2 nd				Solve Simple Problems	
08/11/20	3 rd	3 rd				Solve Simple Problems	
09/11/20	4 th	4 th				Class Test	

9	10	11	12	13	14
Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	Solve Simple Problems	S. K. Nwankwo	08/11/20	S. K. Nwankwo	09/11/20
	Solve Simple Problems	S. K. Nwankwo	09/11/20	S. K. Nwankwo	10/11/20
	Solve Simple Problems	S. K. Nwankwo	10/11/20	S. K. Nwankwo	11/11/20
	Class Test	S. K. Nwankwo	11/11/20	S. K. Nwankwo	12/11/20

TEACHERS

LESSON NOTE

1	2	3	4	5	6	7	8
Date	Week	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
28/11/23		5 th				Direct stresses, Bending in Max & min stress.	
14/11/23		5 th				Eccentric load on Column	
17/11/23		5 th				Axial load on Column	
25/11/23		5 th		Combined direct & bending stress		Define column	

9	10	11	12	13	14
Evaluative Questions	Expected learning outcomes	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	Define column		S.K. Mohan 15/11/23		
	Axial load on column		S.K. Mohan 17/11/23		
	Eccentric load on column		S.K. Mohan 19/11/23		
	What are the loads.		S.K. Mohan 21/11/23		
	What is max & min bending stress		S.K. Mohan 23/11/23		

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1	2	3	4	5	6	7	8
Date	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used	
21/11/23	1 st	Math	- do -		Numerical Problems solve		
23/11/23	1 st	Math			Buckling load computation using Euler's formula in columns with various conditions		
14/11/23	5 th				Assumption of pure torsion		
28/11/23	5 th				The torsion eqn for solid circular shaft		

9	10	11	12	13	14
Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
	Numerical Problem solve		S. K. Mahapatra 21/11/23		
- Euler's formula - These conditions	Buckling load computation using Euler's formula in columns with various conditions.		S. K. Mahapatra 23/11/23		
	Assumption of pure torsion		S. K. Mahapatra 23/11/23		
	The torsion eqn for solid circular shaft		S. K. Mahapatra 28/11/23		

TEACHERS

LESSON NOTE

Date	Week	Class	Subject	Topic (Concept)	Sub-Topic (Sub-Concept)	Learning Activities to be taken up	TLM to be used
29/11/23	15th	12		- do -		Forming eq ⁿ for hollow circular shaft	
1/12/23	2nd					Comparison bet ⁿ solid & hollow shaft subjected to pure torsion	
2/12/23	3rd					Class test	
5/12/23	4th					Doubt clearing class	

Evaluative Questions	Expected learning outcome	Project work to be assigned	Signature of the Teacher	Signature of the Headmaster	Remarks
9	10	11	12	13	14
	Forming eq ⁿ for hollow circular shaft		S. K. Mohan 29/11/23		
	Comparison bet ⁿ solid & hollow shaft subjected to pure torsion		S. K. Mohan 29/11/23	S. K. Mohan 5/12/23	
	Class test		S. K. Mohan 2/12/23		
	Doubt clearing & Extracurricular		S. K. Mohan 5/12/23		