

**SAMANTA CHANDRASEKHAR INSTITUTE
OF TECHNOLOGY & MANAGEMENT**
SEMILIGUDA-764 036, KORAPUT

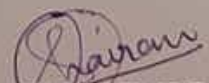
DEPT. OF.....MECHANICAL.....

LESSON PLAN AND PROGRESS REGISTER

(To be maintained by all members of the teaching staff)

SESSION 2022
(EVEN SEMESTER)

NAME Usha Kiran
DESIGNATION HOD
DEPT. Mechanical


SIGNATURE

This Lesson Plan and Progress Register is to be submitted to the Director for verification and counter signature twice in every semester. The H.O.D. must verify and sign this Register before submission.

COURSES ALLOTTED

FOR DIFFERENT BRANCHES & SEMESTER (Degree/Diploma/+2 Science)

Semester	Course No.	Course Title
4 th	Th-1	Theory of Machine
6 th	Th-3	Power Station Engineering

N.B. : Submission of Annual Lesson Plan-cum-Progress Register and performance Report for Assessment are responsibility of each faculty member.

LESSON PLAN

Degree/Diploma/2nd Semester
(Theory/Pract/Lab/Workshop)

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
10/3/22	TH-1 Friction Machines	1.0 Simple Mechanism 1.1 Link Kinematic Chain, Mechanism 1.2 Inversion, four bar link 1.3 Inversion and its inversion. 1.4 Lower pair and Higher pair 1.5 Cam and followers.	01
15/3/22	↓	1.6 Friction between nut and screw 1.7 Friction for square thread, screw jack 1.8 Peeling and its classification 1.9 Description of roller, needle roller & ball bearings. 1.10 Torque transmission in flat pivot and conical pivot bearings.	02
23/3/22	↓	1.11 Flat collar bearing of single and multiple clutches types. 1.12 Torque transmission for single and multiple clutches 1.13 Working of simple frictional brake 1.14 Working of Absorption type of dynamometer.	03
26/3/22	↓	1.15 Power transmission 1.16 concept of power transmission.	01
30/3/22	↓	1.17 Type of drives, belt, gear and chain drive. 1.18 Computation of velocity ratio, length of belts with and without slip. 1.19 Ratio of belt tensions, centrifugal tension and initial tension. 1.20 Power transmitted by the belt.	02
4/4/22	↓	1.21 Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension.	1
9/4/22	↓	1.22 V-bells and V-bells pulleys. 1.23 Concept of crowning of pulleys.	2

PROGRESS

Degree/Diploma/2nd Semester
(Theory/Pract/Lab/Workshop)

Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/Signature of HOD/Instructor
10/3/22	TH-1 TM	36	1. Introduction to the subject.		Principal
12/3/22	↓	37	2. Define link, kinematic chain		Principal
14/3/22	↓	37	3. Mechanism and Machine, structure.		Principal
15/3/22	↓	36	4. Joint, Types of joint & types of link		Principal
16/3/22	↓	38	5. Kinematic pair, types of kinematic types of kinematic		Principal
17/3/22	↓	37	6. Lower pair, and higher pair		Principal
20/3/22	↓	37	7. Cam and followers		Principal
23/3/22	↓	34	8. Inversion, four bar link mechanism of its inversion		Principal
24/3/22	↓	29	9. Revised the topics.		Principal
29/3/22	↓	29	10. Friction between nut and screw, Jack square thread		Principal
30/3/22	↓	29	11. Screw Jack		Principal
31/3/22	↓	27	12. Bearing and its classification		Principal
06/4/22	↓	32	13. Description of roller, needle roller and ball bearings.		Principal
09/4/22	↓	34	14. Torque transmission in flat and conical bearings		Principal
05/04/22	↓	32	15. Flat collar bearing of single and multiple clutch type.		Principal
06/04/22	↓	41	16. Working of simple frictional brake		Principal
07/04/22	↓	35	17. Working of Absorption type of dynamometer.		Principal

LESSON PLAN

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester: 4th Sem Branch: Mechanical

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
18/4/22	TH1 TDM	39 Gear drives and its terminology 39.01 Gear trains, working principle of simple, compound, reverted and epicyclic gear trains.	01
19/4/22		40 GOVERNORS AND FLYWHEEL 41 function of governor. 42 classification of governor. 43 Working of Watt, Porter, Proell and Huxtable governors.	01
20/4/22		44 Conceptual explanation of Sensitivity, stability and isochronisms. 45 Function of Flywheel.	01
28/4/22		46 Comparison between Flywheel & governor.	01
30/4/22		47 Utilization of energy and coefficient of fluctuation of speed.	01
2/5/22		50 BALANCING OF MACHINE 51 concept of static and dynamic balancing.	01
4/5/22		52 static balancing of rotating parts.	01
10/5/22		53 Principles of balancing of reciprocating parts.	01
11/5/22		54 Causes and effect of unbalance. 55 Difference between static and dynamic balancing.	02
12/5/22		60 VIBRATION OF MACHINE PARTS 61 Introduction to vibration and related terms (amplitude, time period and frequency, cycle)	02
13/5/22		62 Classification of vibration. 63 Basic concept of natural, forced & damped vibration. 64 To resonant and longitudinal vibration.	01
17/5/22		65 causes & remedies of vibration.	02
20/5/22			02
29/5/22			01
24/5/22			02
26/5/22			02
28/5/22			02

PROGRESS

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester: 4th Sem Branch: Mechanical





Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken, mention the reasons	Remarks/Signature of HOD/Director
08.04.22	TH1 TDM	36	Torque transmission for single and multi ple clutches.		Principal SCITM, SEMILIGUDA KORAPUT
09.04.22		37	Working of simple Frictional brakes.		
11.04.22		30	Working of Absorption type of dynamometer.		
12.04.22		32	Concept of Power transmission.		
13.04.22		34	Types of drives and computation of velocity ratio.		
14.04.22		31	Lengths of belt open & crossed type		Principal SCITM, SEMILIGUDA KORAPUT
15.04.22		31	Ratio of belts in tension, centrifugal tension and initial tension		
16.04.22		31	Revised - the about topics and cleared doubts		
30.04.22		32	Power transmitted by the belt.		
31.04.22		33	Determine belt thickness and width for given permissible stress.		
28.04.22		33	V-belt and v-belt Pulleys.		Principal SCITM, SEMILIGUDA KORAPUT
23.04.22		39	Concept of Crowning of Pulleys.		

PROGRESS

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester 4th

Branch Mechanical



Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/ Signature of HOD/Director
25.04.22	TH-1 TOM	32	Solved some problems of the friction chapter.		 PRINCIPAL SCITM, SEMILIGUDA KORAPUT
26.04.22		37	Gear drives and its terminology		PRINCIPAL SCITM, SEMILIGUDA KORAPUT
27.04.22		32	Gear trains, working principle of simple gear train.		
28.04.22		37	Working Principle of compound, reverted and epicyclic gear train.		
29.04.22		35 4	Introduction of Governor & flywheel		
30.04.22		40	Classification and working of Watt's		
01.05.22		37	Porter governor.		 PRINCIPAL SCITM, SEMILIGUDA KORAPUT
02.05.22		40	working of proell and Hartnell governor.		PRINCIPAL SCITM, SEMILIGUDA KORAPUT
03.05.22	34	Conceptual explanation of sensitivity, stability and isochronism.			
			Fluctuation of energy and coefficient of fluctuation of speed.		
			5) Balancing of Machine.		
04.05.22		36	Concept of static and dynamic balancing		
5.05.22		25	static balancing of rotating parts.		
06.05.22		21	Causes and effect of unbalance.		 PRINCIPAL SCITM, SEMILIGUDA KORAPUT
20.05.22			Difference between static and dynamic balancing.		PRINCIPAL SCITM, SEMILIGUDA KORAPUT

PROGRESS

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester _____

Branch _____

Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/ Signature of HOD/Director
May	T#1 TOM		② Vibration of machine parts.		 PRINCIPAL
7.6.22		12	Introduction to vibration and related terms.		SCITM, SEMILIGUDA KORAPUT
8.6.22		10	Classification of vibration.		
10.06.22		15	Basic concept of natural, forced and damped vibration.		
12.06.22		17	Torsional and longitudinal vibration.		
			Causes and remedies of vibration.		 PRINCIPAL
					SCITM, SEMILIGUDA KORAPUT
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LESSON PLAN

Semester 6th Sem

Branch Power Station Engg

Degree/Diploma / 2 Science
(Theory/Prac/Lab/Workshop)

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes
10/3/22	TH-9 Paper Station Engineering	1.0 INTRODUCTION: 1.1 Describe sources of energy. 1.2 Explain concepts of central and captive power station. 1.3 classify power plants. 1.4 Importance of electrical power in day to day life.	1
11/3/22		1.5 overview of method of electrical power generation 2.0 Thermal power stations 2.1 layout of steam power stations	2
14/3/22		2.2 Steam power cycle. Explain Carnot vapour power cycle with P-V, T-S diagram & determine thermal efficiency. 2.3 Explain Rankine cycle with P-V, T-S & H-S diagram & determine thermal efficiency, make the condenser ratio, & specific steam consumption.	1
15/3/22		2.4 Solve simple Problems 2.5 list of thermal power station in the state with their capacities	2
16/3/22		3.0 Boiler accessories operation of air pre heater, operation of air pre heater, operation of economiser, operation of superheater, need of boiler mountings & heaters.	3
21/3/22		3.1 operation of boiler. 3.2 Draught systems (Natural draught, forced draught & balanced draught) with their advantages & disadvantages.	1
24/3/22		3.3 Steam prime movers: Advantages & disadvantages of steam turbine, Elements of steam turbine, governing of steam turbine.	2
25/3/22		3.4 performance of steam turbine 3.5 Explain Thermal efficiency, stage efficiency & gross efficiency. 3.6 Steam condensers: function of condenser, classification of condensers.	4
28/3/22			2
2/4/22			1
4/4/22			1

PROGRESS

Degree/Diploma / 2 Science
(Theory/Prac/Lab/Workshop)

Semester	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/ Signature of HOD/Director
6th	TH-9	47	Introduction to the subject.		
6th	PSE	47	Describe sources of Energy		
11/3/22		38	Explain concepts of central and captive power stations		
12/3/22		36	Importance of electrical power generation		
14/3/22		37	Thermal power stations		
15/3/22		38	Layout of steam power stations.		
16/3/22		36	Explain Carnot vapour cycle with P-V & T-S diagram		
17/3/22		30	Determination of thermal efficiency.		
18/3/22		39	Explain Rankine cycle with P-V, T-S and H-S diagram		
21/3/22		40	Determine simple Problems related to the above topics.		
22/3/22		38	List of thermal power stations in the state with their capacities.		
23/3/22		41	Boiler accessories operation of air preheater		
24/3/22		32			
25/3/22		35			
26/3/22		41			
28/3/22		36			
2/4/22		30			
4/4/22					

Principal
SMTM, SEMMANGUDA
KORAPUT

LESSON PLAN

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

6th Sem Branch

P.S.E

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
4/4/22	TH-9. Power Station Engineering	Auxiliaries such as hot well, Condenser extraction pump, air extraction pump & circulating pump	02
5/4/22	Station Engineering	2.10 Cooling Towers: function & types 2.11 Cooling towers & spray ponds, 2.12 Selection of site for thermal power stations.	02
7/4/22	Engineering	2.10 Nuclear Power stations 3.01 Explain fusion & fission reaction	01
9/4/22	Engineering	3.02 classify nuclear fuel (Fertile, fissile material)	02
11/4/22	Engineering	3.03 Explain working of nuclear power plants with block diagram.	02
13/4/22	Engineering	3.04 Explain the working of construction of nuclear reactors	02
18/4/22	Engineering	3.05 Compare the nuclear & thermal plants	02
20/4/22	Engineering	3.06 Explain the disposal of nuclear waste	02
23/4/22	Engineering	3.07 Selection of site of nuclear power stations	01
25/4/22	Engineering	3.08 List of nuclear power stations	01
23/4/22	Engineering	4.0 Diesel electric power stations 4.01 state the advantages & disadvantages of diesel electric power stations	01/19
26/4/22	Engineering	4.02 Explain briefly different systems of diesel electric power stations. Fuel storage & fuel supply system, Fuel injection system, air supply system, exhaust system, cooling system, lubrication system, starting system governing system.	02
28/4/22	Engineering	4.03 selection of site for diesel electric power stations	02
30/4/22	Engineering	4.04 performance & thermal efficiency of diesel electric power stations	02
4/5/22	Engineering	5.0 Hydro power stations - 5.01 state advantage & disadvantage of hydro electric power plant	01

PROGRESS

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

6th Sem Branch

P.S.E

Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/ Signature of HOD/Director
11/04/22	TH-9 Power Station Engineering	29	Operation of electro static precipitator, Economiser & Superheater.		Principal SCTM, SEMILINGUDA KORAPUT
12/04/22	Engineering	35	Need of boiler mountings and operation of boiler		Principal SCTM, SEMILINGUDA KORAPUT
16/04/22	Engineering	15	Draught system (Natural, forced and balanced)		
16/04/22	Engineering	30	Advantages and disadvantages of draught system.		
19/04/22	Engineering	31	Advantage and disadvantage of steam turbine.		
20/04/22	Engineering	29	Elements of steam turbine, governing of steam turbine.		
22/04/22	Engineering	33	Explain thermal efficiency, steam efficiency and gross efficiency		Principal SCTM, SEMILINGUDA KORAPUT
25/04/22	Engineering	27	Solved simple problems.		
26/04/22	Engineering	29	Function of condenser. Classification of condensers.		
27/04/22	Engineering	27	Auxiliaries Such as hot well, Condensers extraction pump, air extraction pump & circulating pump.		
4/5/22	Engineering	25	Functions and types of cooling towers & spray ponds.		
5/5/22	Engineering	25	Selection of site for thermal power stations.		
11/5/22	Engineering	28	Nuclear Power Station: Selection of site for thermal power stations.		
15/5/22	Engineering	29	Nuclear Power Station: Explain nuclear fission reaction.		
16/5/22	Engineering	31	Classify nuclear fuel (Fertile & fissile) and thermal efficiency.		Principal SCTM, SEMILINGUDA KORAPUT

LESSON PLAN

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester	Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
	11/5/22	TH-3 PSE	5.2 classify & explain the general arrangement of storage type hydroelectric project & explain its operation of size of hydroel power plant	02
	12/5/22		5.4 list of hydro power stations with their capacities & no. of units in the state.	02
	14/5/22		5.5 Types of turbines & governor of coal.	01
	17/5/22		5.6 Simple problems	01
	18/5/22		6.0 Gas turbine power stations	01
			6.1 selection of site of gas turbine stations.	
			6.2 Fuels for gas turbine	02
			6.3 elements of simple gas turbo gas power plants.	01
	19/5/22		6.4 merits, demerits & application of gas turbine power plants.	02
	21/5/22			
	23/5/22			

PROGRESS

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester	Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/ Signature of HOD/Director
	11/5	TH-3 PSE	32	Explain the working of nuclear power plant with block diagram		Principal S. J. M. SEMILINGUDA KORAPUT
	12/5		26	Explain the working and construction of nuclear reactor.		
	14/5		26			
	16/5		21	compare the nuclear and thermal plants		
	19/5		31	Explain the disposal of nuclear waste.		
	21/5		29	selection of site of nuclear power stations.		
	23/5		34	List of nuclear power stations		Principal S. J. M. SEMILINGUDA KORAPUT
	25/5		34	Diesel electric power station along with advantage and disadvantage of diesel electric power station.		
	01/6		35			
	2/6		35	Explain briefly fuel storage, fuel supply system, air supply system.		
	4/6		33	Explain exhaust system, cooling system, lubrication system		
	6/6		33	Exhaust system, starting system.		
	8/6		30	Selection of site for diesel electric power station.		
	9/6		21	Performance and thermal efficiency of diesel electric power station.		
	13/6		16	Doubt clearing class		Principal S. J. M. SEMILINGUDA

PROGRESS

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester _____

Branch _____

Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/ Signature of HOD/Director
18/6	TH-3 Power	08	Hydro electric Power Plant - (Explanation)		✓ PRINCIPAL SCITM, SEMILIGUDA KORAPUT
20/6	Station Engineering	10	State advantage and disadvantage of hydro electric power plant		
21/6	-ag	11	Explain the general arrangement of storage		
	↑		Type hydro electric Project and explain its operation		
23/6		12	Selection of site of hydel power plant		
25/6		13	List of hydropower station with their		
27/6		14	Capacities and no. of units in the state.		✓ PRINCIPAL SCITM, SEMILIGUDA KORAPUT
29/6		15	Types of turbines and generators used		
30/6	do	16	Simple problems solved		
02/7		17	Gas turbine power stations.		
03/7		18	Selection of site of gas turbine station		
04/7		19	Elements of simple gas turbine power plants		
05/7	↓	20	Merits, demerits and application of		
06/7		21	gas turbine power plants		
			Doubt clearing class.		✓ PRINCIPAL SCITM, SEMILIGUDA KORAPUT