GANDHI SCHOOL OF ENGINEERING
BHABANDHA, BERHAMPUR
SESSION PLAN
4TH SEMESTER, BRANCH-MECHANICAL(GROUP 1)

TH 1 - THEORY OF MACHINES

Name of the Faculty – ER. DATI JAYARAM						
Topics to be taken						
SL NO & CHAPTER	**No. of Periods assigned by SCTE & VT**	**Details of the topics**	**PLANNED DATE**	**Details of the topics**	**ACTUAL DATE**	**Remarks**
1. Simple mechanism	**8**	1.1 Link ,kinematic chain, mechanism, machine 1.2 Inversion, four bar link mechanism and its inversion 1.3 Lower pair and higher pair 1.4 Cam and followers	**18.01.2024 TO 30.01.2024**	1.1 Link ,kinematic chain, mechanism, machine 1.2 Inversion, four bar link mechanism and its inversion 1.3 Lower pair and higher pair 1.4 Cam and followers	**18.01.2024** **19.01.2024** **22.01.2024** **25.01.2024** **29.01.2024** **30.01.2024**	

2. Friction	**12**	2.1 Friction between nut and screw for square thread, screw jack 2.2 Bearing and its classification, Description of roller, needle roller& ball bearings. 2.3 Torque transmission in flat pivot& conical pivot bearings. 2.4 Flat collar bearing of single and multiple types. 2.5 Torque transmission for single and multiple clutches 2.6 Working of simple frictional brakes. 2.7 Working of Absorption type of dynamometer	**1.02.2024 TO 16.02.2024**	2.1 Friction between nut and screw for square thread, screw jack 2.2 Bearing and its classification, Description of roller, needle roller& ball bearings. 2.3 Torque transmission in flat pivot& conical pivot bearings. 2.4 Flat collar bearing of single and multiple types. 2.5 Torque transmission for single and multiple clutches 2.6 Working of simple frictional brakes. 2.7 Working of Absorption type of dynamometer	**1.02.2024** **2.02.2024** **5.02.2024** **6.02.2024** **8.02.2024** **9.02.2024** **12.02.2024** **13.02.2024** **15.02.2024** **16.02.2024**	

3. Power Transmission	**12**	3.1 Concept of power transmission 3.2 Type of drives, belt, gear and chain drive. 3.3 Computation of velocity ratio, length of belts (open and cross)with and without slip. 3.4 Ratio of belt tensions, centrifugal tension and initial tension. 3.5 Power transmitted by the belt. 3.6 Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension. 3.7 V-belts and V-belts pulleys. 3.8 Concept of crowning of pulleys. 3.9 Gear drives and its terminology. 3.10 Gear trains, working principle of simple, compound, reverted and epicyclic gear trains.	**19.02.2024 TO 7.03.2024**	3.1 Concept of power transmission 3.2 Type of drives, belt, gear and chain drive. 3.3 Computation of velocity ratio, length of belts (open and cross)with and without slip. 3.4 Ratio of belt tensions, centrifugal tension and initial tension. 3.5 Power transmitted by the belt. 3.6 Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension. 3.7 V-belts and V-belts pulleys. 3.8 Concept of crowning of pulleys. 3.9 Gear drives and its terminology. 3.10 Gear trains, working principle of simple, compound, reverted and epicyclic gear trains.	**19.02.2024** **20.02.2024** **22.02.2024** **23.02.2024** **26.02.2024** **27.02.2024** **29.02.2024** **1.03.2024** **4.03.2024** **7.03.2024**	

4. Governors and Flywheel	**12**	4.1 Function of governor 4.2 Classification of governor 4.3 Working of Watt, Porter, Proel and Hartnell governors. 4.4 Conceptual explanation of sensitivity, stability and isochronisms. 4.5 Function of flywheel. 4.6 Comparison between flywheel &governor. 4.7 Fluctuation of energy and coefficient of fluctuation of speed.	**11.03.2024 TO 2.04.2024**	4.1 Function of governor 4.2 Classification of governor 4.3 Working of Watt, Porter, Proel and Hartnell governors. 4.4 Conceptual explanation of sensitivity, stability and isochronisms. 4.5 Function of flywheel. 4.6 Comparison between flywheel &governor. 4.7 Fluctuation of energy and coefficient of fluctuation of speed.	**11.03.2024** **12.03.2024** **14.03.2024** **15.03.2024** **18.03.2024** **19.03.2024** **21.03.2024** **22.03.2024** **28.03.2024** **2.04.2024**	

5. Balancing of Machine	**8**	5.1 Concept of static and dynamic balancing. 5.2 Static balancing of rotating parts. 5.3 Principles of balancing of reciprocating parts. 5.4 Causes and effect of unbalance. 5.5 Difference between static and dynamic balancing	**4.04.2024 TO 18.04.2024**	5.1 Concept of static and dynamic balancing. 5.2 Static balancing of rotating parts. 5.3 Principles of balancing of reciprocating parts. 5.4 Causes and effect of unbalance. 5.5 Difference between static and dynamic balancing	**4.04.2024** **5.04.2024** **8.04.2024** **9.04.2024** **12.04.2024** **15.04.2024** **16.04.2024** **18.04.2024**	

6. Vibration of machine parts	**8**	6.1 Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle) 6.2 Classification of vibration. 6.3 Basic concept of natural, forced & damped vibration 6.4 Torsional and Longitudinal vibration. 6.5 Causes & remedies of vibration.	**19.04.2024 TO 26.04.2024**	6.1 Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle) 6.2 Classification of vibration. 6.3 Basic concept of natural, forced & damped vibration 6.4 Torsional and Longitudinal vibration. 6.5 Causes & remedies of vibration.	**19.04.2024** **22.04.2024** **23.04.2024** **25.04.2024** **26.04.2024**	

D. Jayaram

CLASS COVERED BY

HOD
Mechanical Engg.
Gandhi School of Engg.
Berhampur (Gm.)

HOD, MECHANICAL

GANDHI SCHOOL OF ENGINEERING
BHABANDHA, BERHAMPUR
SESSION PLAN
4TH SEMESTER, BRANCH-MECHANICAL(GROUP 2)

TH 1 - THEORY OF MACHINES

Name of the Faculty – ER. SANJAYA KUMAR SAHU						
Topics to be taken						
SL NO & CHAPTER	**No. of Periods assigned by SCTE & VT**	**Details of the topics**	**PLANNED DATE**	**Details of the topics**	**ACTUAL DATE**	**Remarks**
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2. Friction	**12**	2.1 Friction between nut and screw for square thread, screw jack 2.2 Bearing and its classification, Description of roller, needle roller& ball bearings. 2.3 Torque transmission in flat pivot& conical pivot bearings. 2.4 Flat collar bearing of single and multiple types. 2.5 Torque transmission for single and multiple clutches 2.6 Working of simple frictional brakes. 2.7 Working of Absorption type of dynamometer	**1.02.2024 TO 17.02.2024**	2.1 Friction between nut and screw for square thread, screw jack 2.2 Bearing and its classification, Description of roller, needle roller& ball bearings. 2.3 Torque transmission in flat pivot& conical pivot bearings. 2.4 Flat collar bearing of single and multiple types. 2.5 Torque transmission for single and multiple clutches 2.6 Working of simple frictional brakes. 2.7 Working of Absorption type of dynamometer	**1.02.2024** **3.02.2024** **5.02.2024** **6.02.2024** **8.02.2024** **10.02.2024** **12.02.2024** **13.02.2024** **15.02.2024** **17.02.2024**	

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4. Governors and Flywheel	**12**	4.1 Function of governor 4.2 Classification of governor 4.3 Working of Watt, Porter, Proel and Hartnell governors. 4.4 Conceptual explanation of sensitivity, stability and isochronisms. 4.5 Function of flywheel. 4.6 Comparison between flywheel &governor. 4.7 Fluctuation of energy and coefficient of fluctuation of speed.	**11.03.2024 TO 30.03.2024**	4.1 Function of governor 4.2 Classification of governor 4.3 Working of Watt, Porter, Proel and Hartnell governors. 4.4 Conceptual explanation of sensitivity, stability and isochronisms. 4.5 Function of flywheel. 4.6 Comparison between flywheel &governor. 4.7 Fluctuation of energy and coefficient of fluctuation of speed.	**11.03.2024** **12.03.2024** **14.03.2024** **16.03.2024** **18.03.2024** **19.03.2024** **21.03.2024** **23.03.2024** **28.03.2024** **30.03.2024**	

5. Balancing of Machine	**8**	5.1 Concept of static and dynamic balancing. 5.2 Static balancing of rotating parts. 5.3 Principles of balancing of reciprocating parts. 5.4 Causes and effect of unbalance. 5.5 Difference between static and dynamic balancing	**2.04.2024 TO 16.04.2024**	5.1 Concept of static and dynamic balancing. 5.2 Static balancing of rotating parts. 5.3 Principles of balancing of reciprocating parts. 5.4 Causes and effect of unbalance. 5.5 Difference between static and dynamic balancing	**2.04.2024** **4.04.2024** **6.04.2024** **8.04.2024** **9.04.2024** **13.04.2024** **15.04.2024** **16.04.2024**	

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Sanjaya Kumar Sahu

CLASS COVERED BY

HOD
Mechanical Engg.
Gandhi School of Engg.
Berhampur (Gm.)

HOD, MECHANICAL