



**JEYPORE SCHOOL OF ENGINEERING AND TECHNOLOGY, RANDAPALLI
DEPARTMENT OF COMPUTER SCIENCE ENGINEERING**

LESSON PLAN FOR YEAR:-2025-26

SUB:-AUTOMOBILE ENGINEERING

**DISCIPLINE:
MECHANICAL ENGINEERING**

SEM:- 6TH

**NAME OF THE TEACHING FACULTY:-
MR.AMULYA KUMAR PANDA**

NO.OFWEEK:- 15

**NO.OF DAYS/PER
WEEK
CLASS ALLOTTED: 4**

**SEMESTER FROM DATE : 22/12/25
TO DATE:-18/04/26**

**COURSE
OUTCOMES**

- **CO1:** Understand and evaluate the performance of IC Engines through various tests.
- **CO2:** Analyze the working principles and efficiency of Reciprocating and Rotary Air Compressors.
- **CO3:** Determine the properties of steam and evaluate the performance of various Boilers.
- **CO4:** Explain the mechanics of Steam Nozzles, Turbines, and Condensers.
- **CO5:** Apply the fundamental laws of Conduction,

WEEK	PERIOD	THEORY/PRACTICAL TOPICS
1ST	1ST	Performance of IC Engine: Introduction, Brake Power (BP), Indicated Power (IP)
	2ND	Friction Power (FP), Mechanical efficiency, Indicated & Brake thermal efficiency
	3RD	Specific fuel consumption, Relative efficiency, and Air standard efficiency
	4TH	Numerical problems on engine power and efficiencies
2ND	1ST	Morse Test for multi-cylinder engines
	2ND	Heat Balance Sheet: Procedure and significance
	3RD	Numerical problems on Morse Test and Heat Balance Sheet
	4TH	QUIZ & ASSIGNMENT-I
3RD	1ST	Air Compressor: Classification, Working of Single stage Reciprocating compressor
	2ND	Expression for work done (with and without clearance)
	3RD	Volumetric efficiency and Isothermal efficiency
	4TH	Numerical problems on Single stage reciprocating compressors
4TH	1ST	Multi-stage compression: Advantages and need for intercooling
	2ND	Rotary Compressors: Centrifugal and Axial flow compressors

WEEK	PERIOD	THEORY/PRACTICAL TOPICS
11TH	1ST	Numerical problems on Impulse Turbines (Work done and efficiency)
	2ND	Steam Condensers: Function and types (Jet and Surface condensers)
	3RD	Condenser Efficiency and Vacuum Efficiency
	4TH	QUIZ & ASSIGNMENT-III
12TH	1ST	Heat Transfer: Modes of heat transfer: Conduction, Convection, Radiation
	2ND	Fourier's Law of Conduction and Thermal Conductivity
	3RD	Newton's Law of Cooling and Stefan-Boltzmann Law
	4TH	Simple numerical problems on Heat Transfer
13TH	1ST	Heat Exchangers: Shell & Tube, Parallel and Counterflow types
	2ND	Review of IC Engine Performance & Air Compressors
	3RD	Review of Steam Properties & Boilers
	4TH	QUIZ & ASSIGNMENT-IV
14TH	1ST	Discussion of Previous Year Questions (Unit 1 & 2)
	2ND	Discussion of Previous Year Questions (Unit 3 & 4)
	3RD	Discussion of Previous Year Questions (Unit 5 & 6)
	4TH	Doubt Clearing Session
15TH	1ST	Revision of Important Formulae
	2ND	Internal Assessment / Mock Test
	3RD	Final Lab Record Verification
	4TH	Final Semester Preparation & Guidance

**LEARNING
RESOURCES**

- *Theory of Machines* by R.S. Khurmi and J.K. Gupta.
- *Theory of Machines* by S.S. Rattan.
- *Mechanism and Machine Theory* by J.S. Rao.


SIGN OF FACULTY
CONCERN


SIGN OF HOD


PRINCIPAL