



GOVERNMENT POLYTECHNIC, NABARANGPUR

DEPARTMENT OF AUTOMOBILE ENGINEERING

Discipline: AUTOMOBILE ENGG	Semester: 4TH	Name of the Teaching Faculty: Sri Kiran Kumar Behera
Subject: AUTO ENGINE LAB-I (PR-1)	No. of days/per week class allotted: 06	Semester From date: 04.02.2025 To Date: 17.05.2025 No. of Weeks: 15
COURSE OUTCOMES	1. Calculate IHP, BHP and FC of single cylinder, multicylinder petrol and diesel engines. 2. Understand various parts and systems present in automobiles	
Week	Class Day	Theory/Practical Topics
1 ST	1-3	Study of constructional details and working principle of petrol engine.
	4-6	Study of constructional details and working principle of petrol engine.
2 ND	1-3	Study of constructional details and working principle of diesel engine.
	4-6	Study of constructional details and working principle of diesel engine.
3 RD	1-3	Determine the brake thermal efficiency of a single cylinder petrol engine.
	4-6	Determine the brake thermal efficiency of a single cylinder petrol engine.
4 TH	1-3	QUIZ AND ASSIGNMENT
	4-6	Determine the brake thermal efficiency of a single cylinder diesel engine
5 TH	1-3	Determine the brake thermal efficiency of a single cylinder diesel engine
	4-6	Determine B.H.P, I.H.P, BSFC of a multi cylinder engine by Morse test.
6 TH	1-3	Determine B.H.P, I.H.P, BSFC of a multi cylinder engine by Morse test.
	4-6	Study of fuel feed system of petrol and diesel engine
7 TH	1-3	Study of fuel feed system of petrol and diesel engine
	4-6	QUIZ AND ASSIGNMENT
8 TH	1-3	Testing of fuel injection system and adjustment of pressure of a fuel injector.
	4-6	Identification of various units of a vehicle
9 TH	1-3	Study of different types of cooling system used in a vehicle.
	4-6	Study of lubrication system of a vehicle.
10 TH	1-3	Study of different types of engines, adjustment of tappet, clearance of valve, timing adjustment etc.
	4-6	Calibrating and phasing of fuel pump through calibrating machine.
11 TH	1-3	Calibrating and phasing of fuel pump through calibrating machine.
	4-6	QUIZ AND ASSIGNMENT
12 TH	1-3	Testing the Valve spring by spring tester
	4-6	Testing the Valve spring by spring tester

13 TH	1-3	Study of hydraulic control system and pneumatic control system
	4-6	Assembling engine parts such as F.I. pump, injector, fuel filter & other accessories.
14 TH	1-3	Adjustment of valve tappet clearance (four cylinder/six cylinder engine)
	4-6	Study of Air Compressor
15 TH	1-3	LAB RECORD SUBMISSION
	4-6	LAB RECORD SUBMISSION

Yiran Y. Phua
 Sign. Of Faculty
 Concerned

Payal J. Jethava
 Sign. Of HOD I/C

Prakash K. K.
 Academic Coordinator

Principal
 7.2.15