

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2024

Course: Auto Cert. and Homologation

Semester: VIII

Program: B.Tech ADE

Course Code: MEAD 4014

Time : 03 hrs.

Max. Marks: 100

Instructions:

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Enlist the any five-vehicle level and component level testing performed for the BoV-two-wheeler certification	4	CO1
Q.2	What is a chassis dynamometer? What are the different test that can be performed on it to establish the health of the engine?	4	CO1
Q.3	Explain the Constant speed pass by noise test for two wheelers and its significance.	4	CO2
Q.4	What is NCAP rating?	4	CO2
Q5	What is New European Driving cycle (NEDC) how is it different from Modified Indian Driving Cycle (MIDC)	4	CO2

SECTION B
(4Qx10M= 40 Marks)

Q.6	(a) Elaborating the influence of turning radius of a vehicle, explain the factors that can change the turning radius of a vehicle. (b) What are different steering efforts tests? Explain.	10	CO3
Q.7	What is Mean Fully Developed Deceleration (MFDD)? How the braking performance can be measured using MFDD method?	10	CO2
Q.8	In reference to the tyre test explain the following (a) Tyre force test (b) Tyre strength test (c) Tyre endurance test (d) Tyre designation	10	CO3
Q.9	Define the Term NVH and enlist the various Testing conducted on vehicle for NVH.	10	CO3

	OR		
Q.10	Elaborate the different test for laminated safety glass, Side window / door glass, Backlight / Rear toughened glass in automobiles in India?	10	CO3
SECTION-C (2Qx20M=40 Marks)			
Q 11	A horn manufacturing company has manufactured a horn to be installed in passenger vehicle. Explain the Homologation and certification guidelines to be fulfilled for its approval.	20	CO4
Q.12	Categories and write in detail the about all safety concerns in a passengers segment vehicle. Also, highlight the new safety updates and mandates for improving the safety standards.	20	CO4
	OR		
Q.12	Write in detail about the following (a) Ozone test for Windscreen wiper blades (b) Turning circle Diameter test (c) Elaborate 100% Gradeability and find the angle of the slope tested for (d) Tyre performance tests	20	CO4