

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

Online End Semester Examination, May 2021

Programme Name: B. Tech ADE

Semester : VIII

Course Name : Auto Cert. and Homologation

Time : 03 hrs

Course Code : MEAD4007

Max. Marks : 100

Nos. of page(s) : 2

Instructions:

SECTION A

1. Each Question will carry 5 Marks

S.N		Marks	CO
1	Enlist the any five-vehicle level and component level testing is perform for the BoV- two-wheeler certification.	5	CO4
2	Inclination of the seat back in relation to the vertical is known as A. Torso Angle B. H Point C. R point D. Reference zone	5	CO2
3	In the rearward facing seats, two lower belt anchorage and one upper belt anchorage is mandatory for M1 class of vehicle A. True B. False	5	CO1
4	Define A) Auto homologation B) Type Approval	5	CO5
5	Explain various sources of noises in an automobile vehicle.	5	CO3
6	Define the term used in vehicle testing A) Head Restraints B) True Speed	5	CO2

SECTION B

1. Each question will carry 10 marks

2. Instruction: Write short / brief notes/solve the Numerical			
7	Compare to two wheeler certifications, there need to perform additional testing for the certification process of battery operated two wheeler. Explain	10	CO4
8	TATA-NEXON with 2 Airbags has achieved 5-star rating in global NCAP and become the first 5-star rated car in India in safety of Adult occupant protection. It has achieved 16.00 maximum marks out of 17.00. However, the same hatchback achieved 2-star rating in child occupant protection safety. It has achieved 25 maximum marks out of 49. Comment on the below mentioned in detail. A. vehicle's 5-star in Adult occupant protection B. Any additional safety features missing in TATA-Nexon which make it 2-star rated in child safety protection.	10	CO1
9	As per IS 11852:2001 for brake test briefly explain the following points A. pre-requisite to perform the test B. How to the mean fully developed deceleration (MFDD) is calculated and explain on which parameter it depends.	10	CO3
10	Explain in detail various tests performed on vehicles for the safety of occupants. 1.seat belt test 2.Airbag test	10	CO5
11	Performance of automotive brakes is very important from vehicle and pedestrian safety perspective. To ensure the proper functioning of brakes, it has to pass through various testing procedure in sequence. Explain in detail.	10	CO2
SECTION C			
1. Each Question carries 20 Marks.			
2. Instruction: Write long answer.			
12	As an OEM of E-vehicle, L category, the battery need be tested at certified agency before it mount in vehicle. Explain the whole testing procedure and its need in detailed.	20	CO4