

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2020

Programme Name: B.Tech ADE

Semester : VIII

Course Name : Auto Certification & Homologation

Time : 03 hrs

Course Code : ADEG-442

Max. Marks : 100

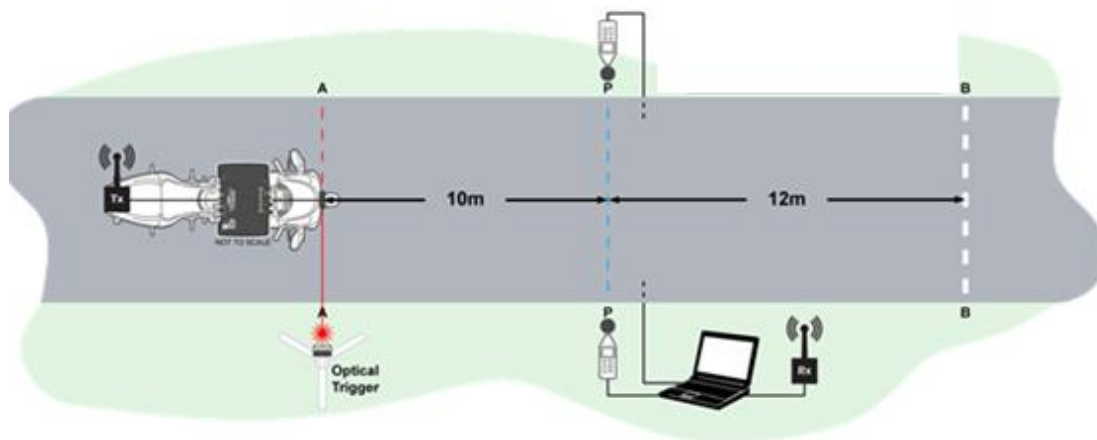
Nos. of page(s) : 2

Instructions:

SECTION A

S.N		Marks	CO
1	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	CO4
2	The height of the head restraints should not be less than mm for front seat and mm for the seats other than front seat. (write the answer in digit)	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	In case of ABS failure, the service brakes performance should not be less than% of the performance criteria of O type brake test with engine disengaged. During the testing of ABS, Locking of indirectly controlled wheels is permitted at any speed, but stability and steer ability shall not be affected and the vehicle shall not exceed a degree yaw angle. (write the answer in digit)	5	CO5
5	During the testing of vehicle, Sound Pressure Level Test for all other vehicles must lie between.....To dB	5	CO3

	<p>A. 74 & 112</p> <p>B. 93 & 112</p> <p>C. 47 & 86</p> <p>D. 32 & 92</p>		
6	Consider the vehicle is running at 60 km/hr speed with rolling resistance of 0.02 and the combine resistance offerd by aerodynamic drag, brake drag and transmission drag is 0.01 calculate the road load require in coast down in Newton (N).	5	CO2
7	According to the new safety norms announced by government of India from Jan 2020, airbags are mandatory in all the vehicles and must get tested before and after mounting in the vehicle. If a company gets its vehicle tested for such norms before as well as after mounting of airbags, is there still a possibility of its malfunctioning and if yes discuss such causes.	10	CO4
8	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.	10	CO1
9	How head restraint and seat belt are associated with driver safety? Explain and discuss their optimum characters in auto certification and homologation.	10	CO3
10	Pillion Hand Hold is considered as important member on the two wheeler, explain in detail how it is being tested from safety point of view.	10	CO5
11	Express your views on the following points in detail A. ISOFIX cars make the vehicle more safer for child safety B. Replacing Euro NCAP system instead Global NCAP	10	CO5
11	As testing agency agent, you been asked by your manager to do the pass by noise testing of the vehicle. Explain in detail, which tests needs to be performed on vehicle for getting the conformity of production permission to the vendor. For the explanation, students can take the reference of the diagram shown below.	20	CO5



Also explain different noise limiting values for various categories of vehicle M and L.