

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	The ABS brake testing is Carried out in the engine connected mode at a test speed of km/h or at % of the design maximum speed of the vehicle, whichever is lower.	5	CO4
2	A section of the wiper blade element when placed in a 50 percent solution of either methyl or isopropyl alcohol for a period of 24 h, it shall not change its weight by more than 12 percent. A. True B. False	5	CO2
3	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	CO1
4	From the saftey point of, there must be a gap of 60 mm in between a seat back and head restraints though the device is adjustable or not. A. True B. False	5	CO5
5	The wiper blade element of the wiper blade assembly must withstand with and Test A. ozone & Furnace B. Furnace & Chemical C. chemical & moisture D. ozone & chemical	5	CO3

6	During the wet test of the conventional brake, Water is sprayed onto each brake with a flow rate of litre/hr and it is equally distributed on each side of the rotor. If the surface of the rotor has any shielding, the spray is applied degree prior to the shield.	5	CO2
7	Explained in detailed, the Process followed to carry out testing of both adult and child occupant protection in the vehicle from safety point of view.	10	CO4
8	A steering manufacturing company has manufactured a steering for the commercial vehicle and they have to test it through testing agency ARAI. What all norms they need to fulfill in order verify the turning radius of vehicle and also briefly explain the testing procedure for it.	10	CO1
9	An external rear view mirror manufacturing company has manufactured a mirror which need to install on the vehicle. Enlist the details of technical specifications as per Homologation and certification guidelines for its approval.	10	CO3
10	Explain in detailed how the steering effort test conducted on vehicle in order to get the approval of conformity of production.	10	CO5
11	Explain Briefly A. Testing procedure for head lights of the automobile B. Testing procedure for reverse and fog lights of the automobile	10	CO5
12	According to new safety norms from January 2020, government of India has made ABS compulsory in all categories of vehicle. Comment on the following points A) Your opinion as a buyer of vehicle B) Explain in detail the test pre-requisites and the ABS testing procedure.	20	CO5