

Enrolment Number: \_\_\_\_\_

**PARUL UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**B.TECH MIDSEM EXAMINATION**

**SEMESTER- 8**

**ACY-2023-24 (EVEN SEM)**

**Subject Name:** - Automotive Certification and Homologation (203102493)

**Branch:** Automobile Engineering

**Date:**31/01/2024

**Time:** 10.30 AM to 12.00 PM

**Total Marks: 40**

Sr. No.	Marks
<b>Q.1 (A) One line Questions:</b>	<b>5</b>
1. Write the full-form of FMVSS.	
2. Write the full-form of AIS.	
3. Write the full-form of MoRTH.	
4. Define rolling resistance.	
5. Define Homologation.	
<b>Q.1 (B) Compulsory Question:</b>	<b>5</b>
1. _____ measures the minimum amount of space required for a vehicle to make a complete 180-degree turn without exceeding its dimensions. a. Turning circle diameter test b. Turning circle radius test c. Turning circle meter test	
2. UTVs are small, four-wheeled vehicles that are designed for use on off-road trails. They are often used for hunting, fishing, and other recreational activities. a. True b. False	
3. The pass-by noise test is an important part of the vehicle _____ to ensure that vehicles meet noise emission standards. a. homologation process b. clearance process c. progress process	
4. Trailers with a maximum mass exceeding 0.75 tonnes, but not exceeding 3.5 tonnes, belongs to _____. a. Category O1 b. Category O2 c. Category O3 d. Category O4	
5. The steering effort test provides valuable data for vehicle designers, manufacturers, and safety regulators. By understanding the steering effort characteristics of a vehicle, they can make informed decisions about vehicle design, steering system calibration, and safety standards. a. True b. False	
<b>Q.2 Attempt any four (Short Questions)</b>	<b>12</b>
1. Explain two main methods of Speedometer calibration.	

2. Explain Motor Vehicles Category-M Layout.
3. What is the key objectives of the Central Motor Vehicles Rules?
4. Define the following listed engine specifications:
  - a. Fuel Induction
  - b. Power output
  - c. Stroke
5. Summarize the key functions of the following regulations organization:
  - a. Australian Design Rules
  - b. Economic Commission for Europe
  - c. European Economic Community

**Q.3 Attempt any two 08**

1. What is the purpose of the Steering Effort Test?
2. Define the following listed Vehicle specifications:
  - a. Drivetrain
  - b. Torque
  - c. Body style
  - d. Fuel Economy
3. Explain the purpose of brake tests and describe the two main types of brake tests.

**Q.4 (A) Explain physical verification and vehicle weighment. 05**

**Q.4 (B) Explain the classification of vehicles. 05**

OR

**Q.4 (B). Explain Motor Vehicles Category-O Layout. 05**