

Enrolment No./Seat No _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VI EXAMINATION – WINTER 2025

Subject Code:3160214

Date:19-11-2025

Subject Name:Vehicle Testing and Homologation

Time:02:30 PM TO 05:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1* (a) What do you mean by homologation? 03
(b) Explain Need of vehicle testing and homologation. 04
(c) Explain working of rope brake dynamometer. 07
- Q.2 (a) Explain detailed testing procedure of Fog lamp of vehicle. 03
(b) Write Measurement of BHP, IHP, BSFC, Thermal Efficiency of IC engine with proper notation. 04
(c) Classify various noise emits from the engine with reasons. 07
- OR
- Q.3 (c) What is Emission test ?Explain Orsat apparatus with neat sketch 07
(a) List the various Active and Passive safety systems in vehicle? 03
(b) Explain procedure for brake stopping distance test. 04
(c) Classify dynamometer. Explain hydraulic dynamometer with sketch. 07
- OR
- Q.3 (a) Explain Brake stopping distance. 03
(b) Define: Dynamometer, Brake Power & Flue Gases. 04
(c) Explain noise control methods in Vehicle Testing and Homologation. 07
- Q.4 (a) Explain Spectroscopic methods. 03
(b) Explain testing of safety seat belt anchorages. 04
(c) What does it mean by Squeak, Buzz and Rattle noise. 07

OR

- Q.4** (a) Explain Measurement of steering effort. 03
(b) Write short note on engine durability test. 04
(c) What is FIP calibrating? Explain FIP calibrating testing 07

- Q.5** (a) Describe AIS-037 03
(b) What do you mean by EURO standards and AIS standards? 04
(c) Explain chassis dynamometer. 07

OR

- Q.5** (a) Demonstrate gradability test 03
(b) Explain slide slip tester. 04
(c) Discuss need of vehicle inspection. 07
