

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2170204****Date:27/05/2019****Subject Name:Vehicle Testing &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.

- Q.1** (a) What do you mean by individual component approval and whole vehicle component approval? **03**
(b) Explain need of vehicle testing and need of homologation in automobile. **04**
(c) Explain working of eddy current dynamometer. **07**
- Q.2** (a) State various noise sources from vehicle and explain wind noise. **03**
(b) Explain procedure to measure consumption of fuel by engine. **04**
(c) Explain working of infrared gas analyzer. **07**
- OR**
- (c) Explain working of ORSAT apparatus with neat sketch. **07**
- Q.3** (a) What is active safety and passive safety and list active and passive safety devices used in automobile? **03**
(b) List types of mounting for engine. Explain hydro elastic mounting **04**
(c) Explain four wheel dynamometer. **07**
- OR**
- Q.3** (a) What do you mean by EURO standards and AIS standards? **03**
(b) What is the procedure for head light beam alignment testing? **04**
(c) Explain working principle of wind tunnel testing. **07**
- Q.4** (a) Discuss need of vehicle inspection. **03**
(b) Explain effects of reflecting surfaces on sound propagation. **04**
(c) Explain testing procedure for gradeability test of vehicle **07**
- OR**
- Q.4** (a) Write short note on side slip tester. **03**
(b) Write the steps to measure turning circle diameter test for the vehicle. **04**
(c) Explain energy consumption in conventional automobiles. **07**
- Q.5** (a) Discuss fire resistance test for vehicle. **03**
(b) Explain types of vehicle inspections. **04**
(c) Explain three chamber corrosion testing procedure. **07**
- OR**
- Q.5** (a) Write short note on engine durability test. **03**
(b) Explain side door intrusion test. **04**
(c) Explain procedure for wheel rim testing. **07**
