

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII • EXAMINATION – SUMMER 2014

Subject Code: 171902

Date:03-06-2014

Subject Name: Automobile Engineering

Time:02:30pm 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) Explain advantages and disadvantages of a passenger car with the engine mounted at the front and rear engine mounting with neat sketch. **07**
- (b) Describe the construction and working of wind screen wiper, Speedometer Odometer and Fuel Gauge **07**
- Q.2** (a) Explain the working of multi plate clutch with neat sketch. **07**
- (b) Explain construction and working of differential unit with neat sketch **07**
- OR**
- (b) Write short note on non-slip type differential **07**
- Q.3** (a) Define (1) castor (2) camber (3) toe in and toe out State their effect on steering geometry with neat sketch. **07**
- (b) Describe the rack and pinion type steering gear box with neat sketch. **07**
- OR**
- Q.3** (a) Designate the tyre with example. Differentiate between tube and tubeless tyre **07**
- (b) What are the difference between Hotchkiss and torque tube drive describe with the help a neat sketch **07**
- Q.4** (a) Explain the working of constant mesh gear box with diagram. **07**
- (b) Explain the need of suspension system and state its objective. **07**
- OR**
- Q.4** (a) Give the classification of automobile brake. Explain with neat sketch the working of master cylinder used in hydraulic brake **07**
- (b) State the function of battery and explain construction of automobile battery with sketch. **07**
- Q.5** (a) What are the different types of rear end suspension ? How does a rigid axle front end suspension differ from an independent front end suspension? **07**
- (b) Explain the typical lighting circuit diagram of a car **07**
- OR**
- Q.5** (a) Enlist the various types of tools and equipment required in service station. **07**
- (b) Write short note on Euro norms **07**
