

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (OLD) - EXAMINATION – SUMMER 2017****Subject Code: 140202****Date: 12/06/2017****Subject Name: Fundamentals Of Automobile Systems****Time: 10:30 AM to 01:00 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 front engine rear wheel drive vehicle layout with sketch. **07**
(b) Write advantages and limitations of CNG as an automobile fuel. **07**
- Q.2** (a) Name various components mounted on the chassis frame. What are the loads coming on a chassis frame? **07**
(b) Explain Constant mech gear box. **07**
- OR**
- (b) Write short note on **07**
i) Torque converter
ii) Gear ratio
- Q.3** (a) Explain the following : **07**
(i) Gradeability of a vehicle
(ii) Resistance during motion
(b) Explain the working of sliding mesh gear box with neat sketch. **07**
- OR**
- Q.3** (a) Write down the braking requirements? Discuss requirements of good lining Material and brake oil. **07**
(b) Draw a neat sketch of internal expanding brakes and explain the components involved. **07**
- Q.4** (a) Explain construction of three-quarter-floating axle with figure. **07**
(b) Write function of each components of LPG conversion kit. **07**
- OR**
- Q.4** (a) Write short note on tyre specification. **07**
(b) Differentiate CI engine and SI engine. **07**
- Q.5** (a) Write short note on power steering. **07**
(b) Explain the requirement of steering system and discuss about steering linkages. **07**
- OR**
- Q.5** (a) Explain air suspension system with neat sketch **07**
(b) Write short note on leaf spring. **07**
