

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- IVth SEMESTER-EXAMINATION – MAY/JUNE- 2012****Subject code: 140202****Date: 31/05/2012****Subject Name: Fundamentals of Automobile Systems****Time: 10:30 am – 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 comparison between petrol engine and diesel engine. **07**
(b) Explain construction and working of four stroke petrol engine with neat sketch. **07**

- Q.2** (a) Explain sliding mesh gear box with neat sketch. **07**
(b) List advantages and limitations of LPG as automobile fuel. **07**

OR

- (b) Explain construction of chassis frame with neat sketch. **07**

- Q.3** (a) Explain various vehicle layouts based on controls and positioning. **07**
(b) Explain tractive force and gradeability. **07**

OR

- Q.3** (a) Explain various resistances during vehicle motion. **07**
(b) Explain bleeding of brakes. **07**

- Q.4** (a) Explain construction and working of internal expanding brakes with neat sketch. **07**
(b) Explain construction and working of propeller shaft with neat sketch. **07**

OR

- Q.4** (a) Write short note on tubeless tyres. **07**
(b) Explain camber and caster in steering with neat sketch. **07**

- Q.5** (a) Give list of steering gear box types and explain any one of them with neat sketch. **07**
(b) Explain various tread patterns of tyre with neat sketch. **07**

OR

- Q.5** (a) List the types of suspension system and explain any one of them with neat sketch. **07**
(b) Explain construction and working of single plate clutch with neat sketch. **07**
