

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE SEM-IV Examination-Nov/Dec-2011

Subject code: 140202

Date: 02/12/2011

Subject Name: Fundamentals of Automobile Systems

Time: 02.30 pm -5.00 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) List out the requirement of a good breaking system. **04**
(b) Describe the common features and major differences in a constant mesh and synchromesh gear box. **05**
(c) List out the advantage and disadvantage of front engine – front wheel drive vehicles. **05**
- Q.2** (a) Explain construction and working of vacuum brake. **07**
(b) Explain construction and working of Tandem master cylinder **07**
- OR**
- (b) Give the classification of vehicle. **07**
- Q.3** (a) What is the steering gear? Explain any two types of steering gear systems with neat sketch **07**
(b) Explain power steering in details. **07**
- OR**
- Q.3** (a) Explain construction and working of vacuum brake with neat sketch. **07**
(b) With neat sketch explain working and construction of centrifugal clutch. **07**
- Q.4** (a) Describe vertical slide type front independent suspension system. **07**
(b) Explain construction and working of telescopic type shock absorber. **07**
- OR**
- Q.4** (a) Explain types of rear axle with neat sketch. **07**
(b) Point out the troubleshooting in case of breaking system and its remedies. **07**
- Q.5** Write short notes on
(a) Torsion bar **04**
(b) Fluid coupling **05**
(c) Hotchkiss type propeller shaft **05**
- OR**
- Q.5** Write short notes on
(a) 'Bleeding of brakes' **04**
(b) Classification of vehicles. **05**
(c) Wheel geometry and its importance. **05**
