

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E -IVth SEMESTER-EXAMINATION – MAY- 2012

Subject code: 741101

Date: 12/05/2012

Subject Name: Hydraulic and Pneumatic systems in Automotive Vehicles

Time: 02:30 pm – 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 various properties of hydraulic fluids. **07**
(b) Explain air brake with neat sketch. **07**
- Q.2** (a) Why FRL unit is required in pneumatic system? Explain. **07**
(b) Explain piston pump with stationery cam and rotating block. **07**
- OR**
- (b) Explain different elements of hydraulic system. **07**
- Q.3** (a) Explain maintenance and trouble shooting of pneumatic circuits. **07**
(b) Explain power steering with neat sketch. **07**
- OR**
- Q.3** (a) Write short note on PLC construction. **07**
(b) Explain fort lift hydraulic gear with neat sketch. **07**
- Q.4** (a) Write short note on hydro-pneumatic suspension. **07**
(b) Discuss the arrangement of a complete pneumatic system with figure. **07**
- OR**
- Q.4** (a) Explain hydraulic tipping mechanism with neat sketch. **07**
(b) Explain selection criteria for motors. **07**
- Q.5** (a) Explain difference between single acting and double acting cylinder used in pneumatic system. **07**
(b) Write short note on maintenance of hydraulic system. **07**
- OR**
- Q.5** (a) Explain hydro-mechanical servo systems. **07**
(b) Write short note on electro pneumatics. **07**
