

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2014

Subject code: 1721101

Date: 16-06-2014

Subject Name: Instrumentation and Vehicle Testing

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.**

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|------------|------------|---|-----------|
| Q.1 | (a) | Discuss factors affecting Selection and Requirement of Measuring instrument | 07 |
| | (b) | List the various devices to measure temperature and pressure of fluid in automobile. Explain any one device with neat sketch. | 07 |
| Q.2 | (a) | Write short note on piezoelectric accelerometer | 07 |
| | (b) | Classify the methods used to measure vibrations and Explain principle of any two methods | 07 |
| OR | | | |
| | (b) | With neat sketch explain the device used to measure the coolant temperature in automobile engine. | 07 |
| Q.3 | (a) | Write short note on air and musical horn | 07 |
| | (b) | Enlist different warning and alarm instruments used in automobile. Explain any one of them with neat sketch | 07 |
| OR | | | |
| Q.3 | (a) | Write short note on oil pressure warning system | 07 |
| | (b) | Enlist major component of Air bag system. Explain each component in brief with neat sketch | 07 |
| Q.4 | (a) | Enlist recording and display devices used in data acquisition system. Explain any one device with neat sketch. | 07 |
| | (b) | Explain data acquisition system with neat sketch | 07 |
| OR | | | |
| Q.4 | (a) | Discuss importance and need of data acquisition system in modern automobile | 07 |
| | (b) | Write short note on laboratory dynamometer testing system for power train | 07 |
| Q.5 | (a) | Explain PUC test procedure for diesel vehicle. | 07 |
| | (b) | Write short note on Road test of an Automobile. | 07 |
| OR | | | |
| Q.5 | (a) | Write short note on EURO standards | 07 |
| | (b) | Write short note on Instrumentation required for testing of Engine | 07 |
