

GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – II • EXAMINATION – WINTER • 2014

Subject code: 1721101**Date: 02-12-2014****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.

- Q.1 (a)** Explain Garage layouts, Workshop management and automotive service equipments. **07**
(b) Explain these terms with example: (i) Precision (ii) Accuracy (iii) Sensitivity **07**
(iv) Error (v) Readability (vi) Reliability (vii) Reproducibility
- Q.2 (a)** Enlist devices to measure temperature and pressure of air and fuel flow into the **07**
engine. Explain any one of them with neat sketch.
(b) Explain the different factors to be considered for choosing a dynamometer. **07**
- OR**
- (b)** Explain how the wheel alignment is carried out? **07**
- Q.3 (a)** Explain in detail working principle and perform operation of (a) Tyre changer (b) Car **07**
Washer.
(b) Write a short note on Overhauling of Carburetor. **07**
- OR**
- Q.3 (a)** What are the different methods used for Pollution controlling technique used for S.I. **07**
engine? Explain.
(b) Explain how the optimum performances of two engines are compared. **07**
- Q.4 (a)** Explain the importance of tyre condition in vehicle performance. **07**
(b) Explain the various methods used for noise reduction in an automobile. **07**
- OR**
- Q.4 (a)** Write short note on road test of automobile vehicles. **07**
(b) Write short note on EURO standards. **07**
- Q.5 (a)** Explain in detail maintenance schedule chart for service of a car. **07**
(b) Write a short note on General Data Acquisition System. **07**
- OR**
- Q.5 (a)** Explain Service procedure for any car with necessary steps. **07**
(b) Explain in detail Inspection and service of an Air conditioning system of a car using **07**
AC recovery unit and UV leak detector.
