Seat No.: _____ Enrolment No._____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**M. E. Sem. – II$^{nd}$ - Examination – June/July- 2011**

## Subject code: 1721106
## Subject Name: Automobile Maintenance & Pollution Control

**Date:29/06/2011** **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.**

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|---|---|---|---|
| **Q.1** | **(a)** | Define Engine Tuning. Explain briefly the tuning procedure for petrol engine car. | **07** |
| | **(b)** | Give causes and remedies for following troubles of automobile. (i) Excessive tyre wear (ii) Engine starts but stops immediately. | **07** |
| **Q.2** | **(a)** | Explain main trouble shooting and servicing operations for drive line of a typical automobile vehicle. | **07** |
| | **(b)** | Write short note on wheel alignment. | **07** |
| | | **OR** | |
| | **(b)** | Explain tyre service and reconditioning. | **07** |
| **Q.3** | **(a)** | Describe different constituents which are exhausted from S.I. Engine. | **07** |
| | **(b)** | Explain with neat sketch the exhaust gas recirculation as emission control system. | **07** |
| | | **OR** | |
| **Q.3** | **(a)** | Write short note on chassis frame alignment. | **07** |
| | **(b)** | Explain procedure for maintenance and servicing of steering system. | **07** |
| **Q.4** | **(a)** | Explain catalytic converter with neat sketch. | **07** |
| | **(b)** | Enlist causes of smoke in diesel engine. Explain any one method for smoke control with neat sketch. | **07** |
| | | **OR** | |
| **Q.4** | **(a)** | Write short note on fuel additives. | **07** |
| | **(b)** | Describe the significance of S.I. Engine modifications in design and operations on emission control. | **07** |
| **Q.5** | **(a)** | Draw the trouble shooting chart of a hydraulic brakes system for a car. | **07** |
| | **(b)** | Write short note on wheel balancing. | **07** |
| | | **OR** | |
| **Q.5** | **(a)** | Explain the Indian Pollution norms as per Central Motor Vehicle Rules. | **07** |
| | **(b)** | Explain Energy Recovery from municipal and Industrial Solid Waste. | **07** |

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