| Seat No.: | Enrolment No |
|-----------|--------------|
|-----------|--------------|

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER- II(New course) • EXAMINATION (Remedial) - WINTER- 2015

| Subject Code: 2721108 Date: 08/12/2 | |)15 | |
|--|------------|---|----------------|
| Sul | oject l | Name: Experimental Techniques and Instrumentation in Automobi | ile |
| | ginee | 0 | |
| Time: 2:30 pm to 5:00 pm Total Marks: 70 Instructions: | | 70 | |
| mst | 1. | Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. | |
| Q.1 | (a) (b) | Describe static and dynamic measurement system Describe data acquisition system with neat sketch | 07 07 |
| Q.2 | (a) | With suitable example differentiate between accuracy and precision in measurements. | 07 |
| | (b) | Define following terms used in measurement 1. Readability 2. Reliability 3. Drift 4. Reproducibility 5. Dead Zone 6. Hysteresis 7. Threshold. OR | 07 |
| | (b) | Enlist different accelerometer. Describe any one accelerometer with neat sketch | 07 |
| Q.3 | (a) (b) | Describe instrumentation required for performance testing of an IC Engine Enlist different instruments required for temperature measurement in automobile. Explain any one with neat sketch OR | 07 07 |
| Q.3 | (a) (b) | Enlist instruments used for dynamic cylinder pressure measurement. Describe any one such instrument. Describe construction and working of mass air flow sensor | 07 07 |
| Q.4 | (a) (b) | Describe brake actuation warning system with neat sketch Explain Permanent magnet horn with neat sketch OR | 07 07 07 |
| Q.4 | (a) (b) | Describe engine oil pressure warning system with neat sketch Explain electromagnetic interference and methods of suppression. | 07 07 |
| Q.5 | (a) (b) | Describe IS codes for engine testing Discuss in detail road test of an automobile OR | 07 07 |
| Q.5 | (a) (b) | Describe laboratory test of an automobile Enlists different crash tests. Describe crash test for an automobile in detail | 07 07 |
