

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEMESTER VIII – EXAMINATION – WINTER 2014

Subject Code: 180202**Date: 04/12/ 2014****Subject Name: Automotive Electricals and Electronics****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 principle and working of Lead Acid Battery with neat sketch. **07**
(b) State the purpose of (1) Fuses (2) Maxi-fuse (3) Circuit Breaker and Explain them. **07**
- Q.2** (a) Describe the procedure of current draw for a Starter Motor. **07**
(b) Draw neat circuit diagram of Bendix Starter drive, state application in brief. **07**
- OR**
- (b) Explain with neat sketch Battery Ignition System with its advantages. **07**
- Q.3** (a) What is an alternator? Compare it with generator. Which will you prefer? Give reasons in support of your answer. **07**
(b) Explain and Draw circuit diagram of Door Operated Interior Lights. **07**
- OR**
- Q.3** (a) Describe Dynamo with the help of a neat diagram. **07**
(b) Write Short Note on Fog Lamps and Side Indicator Lamp with circuit diagram. **07**
- Q.4** (a) Discuss in detail the following : **07**
1) Fuel Gauges
2) Oil Temperature Gauge.
(b) Explain with schematic diagram Anti-Lock Braking System of modern vehicle. **07**
- OR**
- Q.4** (a) Explain in detail Electronic Power Steering of Today's Automobile. **07**
(b) Write Short note on following : **07**
1) Wind Screen Wipers
2) Power Windows
- Q.5** (a) Explain with the help of neat sketch the construction details of a Spark Plug. Differentiate Hot and Cold Spark Plug. **07**
(b) Write short note on Battery Tester and Ignition Coil Tester. **07**
- OR**
- Q.5** (a) Explain following terms used in Ignition System **07**
1) Spark Advance Mechanism
2) Cam Angle
(b) Describe Cam Angle RPM tester and Timing Devices used as Testing Devices in Vehicles. **07**
