

End Semester Examinations - 2015-16 Even Semester - May 2016

14EE2020 Automotive Electronics

Set A

Time : 3 hrs
Total Marks: 100

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1. a. With the aid of sketches, explain the construction and principle of operation of Throttle position sensor used in vehicle.(10)
b. Explain the operation of engine crankshaft angular position sensor. (10)

OR
 2. a. With the aid of sketches explain the construction and working of solenoids and stepper motors in vehicles. (10)
b. Explain in detail, how the Exhaust Gas Oxygen sensor is working for different types of air/fuel ratio mixture concentrations.(10)
 3. a. Sketch the speed - torque characteristics of dc series motor and derive its expression. (8)
b. Describe the principle and construction of a Starter switches. (12)

OR
 4. Enumerate the working principle of different starter drive units.(20)
 5. a. What are the requirements of a spark plug? How does the spark plug work in the contactless electronic ignition system? (12)
b. Explain in detail about ignition timing.(8)

OR
 6. a. Sketch the of ignition coil of an electronic ignition system.(6)
b. What are the different types of solid state ignition systems? Explain their principle of operation. (14)
 7. a. Explain the construction and working of wiper motor. (10)
b. Explain the principle of working of an electric horn. (10)

OR
 8. a. What is meant by dazzling of head lights? Explain the various anti-dazzling devices with neat sketches. (10)
b. Mention different types of fuel gauges and explain each one in detail. (10)
 9. a. Explain Typical Cruise Control and Digital Cruise Control With proper Diagram.(12)
b. Explain Working of Advanced Driver Information Systems(8)

Wishing you All the Best
