

R09

Code No: 56085

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year II Semester Examinations, May - 2019

AUTOMOTIVE ELECTRICAL AND AUTOTRONICS

(Automobile Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any FIVE questions
All Questions carry equal marks**

1. What do you understand by recharging of battery? What are the battery troubles and their remedies? [15]
- 2.a) Differentiate between Battery and Magneto Ignition System.
b) Describe about spark advance and retarding mechanisms. [7+8]
3. Explain in brief the construction and working of Series and Shunt automotive starter motor. [15]
4. Give the Principle of Generation of Direct current. Explain about the maintenance, servicing and troubleshooting. [15]
5. What is the difference between Earth Return and Insulated Return? Explain the major purpose of providing these return systems? [15]
6. Explain the Principle of Automobile Illumination. Explain with a neat diagram the operation of Odometer. [15]
- 7.a) Given that $(B2F8)_{16} = (45816)_b$. Determine the value of b.
b) Subtract $(1011)_2$ from $(1100)_2$ using the 2's complement method. Also show direct subtraction for comparison. [7+8]
- 8.a) Explain about X-OR and X-NOR gates.
b) What are Shift Registers? Discuss its Types and applications. [7+8]

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