

New York City Department of Education
THOMAS A. EDISON CAREER & TECHNICAL EDUCATION HIGH SCHOOL

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Principal

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SUMMER ASSIGNMENT 10th GRADE AUTOMOTIVE ELECTRIC

INSTRUCTIONS: *(If you have questions, e-mail me at Mschnier@taehs.org)*

GO TO: www.autoshop101.com

CLICK ON: Online Instruction

CLICK ON: Electrical Fundamentals

READ: Pages 1 – 36 of the module

*On a **separate sheet of paper**, write the **questions** and **answers** to the questions on the following page*

DUE: Thurs. Sept 14, 2017

*You will be given an **exam** the 1st week in September on this material*

INSTRUCTIONS: *On a separate sheet of paper, write the questions and answers to the following questions*

1. Describe the **atomic structure** of an atom and **name all its components**
2. Explain the difference between **bound** and **free electrons**
3. How do **free electrons** relate to electron flow?
4. How does an **atom** in a conductor differ from an **atom** in an insulator?
5. Discuss the difference between the **Electron Theory of Electricity** and the **Conventional Theory of Electricity**
6. **Define** in detail “voltage” and **how it is measured**
7. **Define** in detail “current” and **how it is measured**
8. **Define** in detail “resistance” and **how it is measured**
9. Give a **detailed explanation of DC**
10. Give a **detailed explanation of AC**
11. What can happen if a wire has too much resistance for the amount of current that must pass through it? (Answer in 1 – 2 paragraphs)