***6.1 Check and Reflect Q&A pg 211***  (\_\_ /22) Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Draw and label a diagram of an atom which has 4 protons, 4 electrons and 5 neutrons. Use +, -, and n as signs to show the charge each particle carries. (3)
2. a. What is friction? (1)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) Explain how friction can be used to transfer electrons. Use examples from triboelectric series. (2)

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1. What is the difference between a conductor and an insulator? (1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. Examples (1 for both) – Conductor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c. Insulator \_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Explain this observation – A plastic rod that contains a large number of electrons does not have a static electric charge. (3)

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1. a. From the book, the Law of Attraction states “opposite charges attract”. That’s only partly correct, what should a “corrected” law of attraction state? (1)

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1. Name 2 GOOD conductors \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name 2 FAIR conductors \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name 2 good insulators \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (/3)

1. Copy and complete the chart from the book pg 211 (5)

|  |  |  |
| --- | --- | --- |
| **Charged Pairs** | **Becomes positively charged** | **Becomes** **negatively charged** |
| Cotton & Steel |  |  |
|  |  |  |
|  |  |  |
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**Research Question Bonus** – 4 marks if all other questions are well answered.

1. a) What are is a Faraday Cage and why is an airplane like one?

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b) Fast food and Faraday cages – what is the connection?

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