**Physics Unit 11: Electrostatic and Electric Potential Test Review**

**Test Setup:**

Multiple Choice: 22(1 pt each ) Short Answers: 5 (5 pt each) Problems: 6 ( 8 )

**Short Answer:**

1. Describe how a nonconducting material, such as paper, becomes attracted to a negatively charged object brought near it.
2. Explain what happens when you vigorously rub your wool socks on a carpeted floor; touch a metal doorknob, and get shocked.
3. A negatively charged rubber rod is brought near a neutral, conductive sphere that has no charge. As a result, the part of the sphere closest to the rod becomes positively charged. Explain how this positive charge occurs.
4. Explain why there is a limit to the amount of charge that can be stored in a capacitor.
5. With regard to the flow of electric current, what is resistance?

**Multiple Choice:**

1. Describe electrostatics.
2. What is the basic law of electrostatics?
3. What is the charge of electrons?
4. Where are charges most easily transferred?
5. Define:
6. Induction
7. Polarization
8. Neutralization
9. Are electric charges conserved?
10. How can the following be charged?
11. Insulators
12. Conductors
13. Surface charge on insulators
14. How are conductors and insulators different based on how they can be charged?
15. Describe:
16. Gravitational forces
17. Electric forces
18. Electric field strength
19. Resultant force
20. What happens when two charges are moved closer together?
21. What is the electric field just outside a charged conductor in electrostatic equilibrium?
22. Where does the charge accumulate for an irregularly shaped conductor in electrostatic equilibrium?
23. What are the characteristics of electric potential energy?
24. What happens when a capacitor discharges?
25. When do charge transfers between the plates of a capacitor stop?

**Problems:**

**Study the homework handouts on the following problem types**

Coulombs Law: 3

Potential energy and potential difference: 3