National School of Sciences

Electrostatics

Questions for practice.

1. A metallic sphere is charged negatively. Will its mass increase, decrease or remain the same.

2. Electrostatic experiments cannot be conducted successfully on humid days or rainy season. Explain.

3. An iron chains touching to the ground are suspended from a vehicle carrying inflammable materials. Why?

4. A charged conical conductor loses its charge earlier than a similarly charged sphere. Why?
5. Why are the tyres of aircrafts made slightly conducting?

6. Why can more charge placed on a metal if it is highly polished than when its surface is rough?

7. Why pointed ends are not kept in electrostatic machine?

8. What is meant by electric wind?

9. Some of the free electron in a good conductor move at speeds of 10^6m/s or faster. Why don't these electrons fly out of the conductor completely?

10. A charged rod attracts bits of dry cork dust, which after touching the rod, often jump violently away from it. Explain.

11. What is electrostatic induction?

12. In between two metallic sphere same in all respect, if one is charged by +Q and other by –Q. which sphere has higher mass why?

13. What is quantization of charge?

14. What is the minimum possible value of electric charge?

15. An atom is initially electrically neutral why?

16. Why do you sometimes experience a slight shock when getting out of your car?

17. A comb when rubbed with dry hair attracts bits of paper. Why? What would you expect if the hair is wet or it is humid day?

18. Can two like charges attract each other? Can a charged body attract uncharged body?

19. Explain how a pith ball can be electrified with positive or negative charge.

20. Differentiate between conductor and insulators.

21. List the properties of electric charge.

22. How a charge body attracts an uncharged body?

23. Calculate the charge carried by 20×10^{18} electrons.

24. How many electrons are contained in 1 coulomb of charge?

25. Charge of 4.8×10^{-15}C is transformed from the plastic ruler to silk. How many electrons are transformed in this process?

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