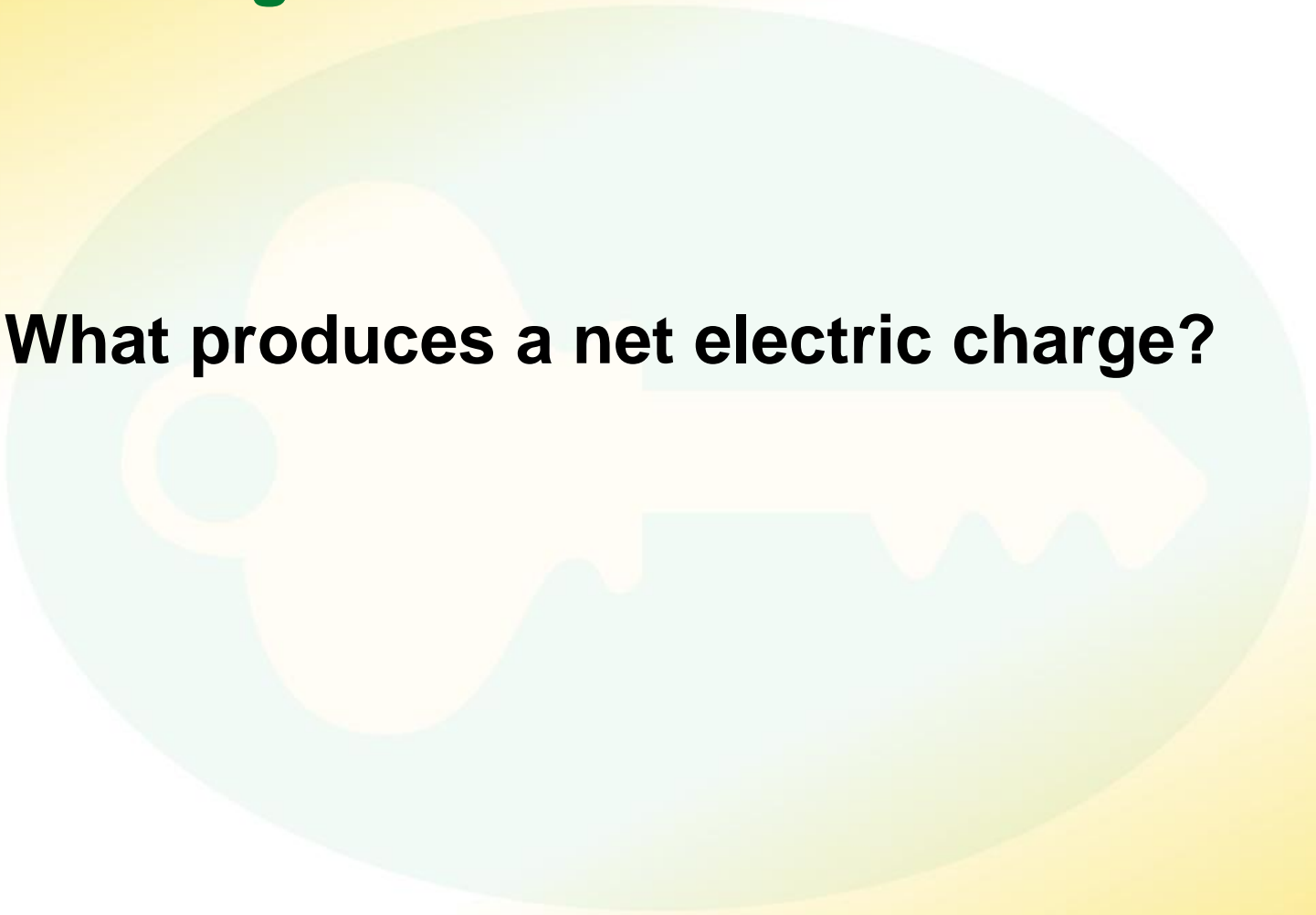


Electric Charge



What produces a net electric charge?



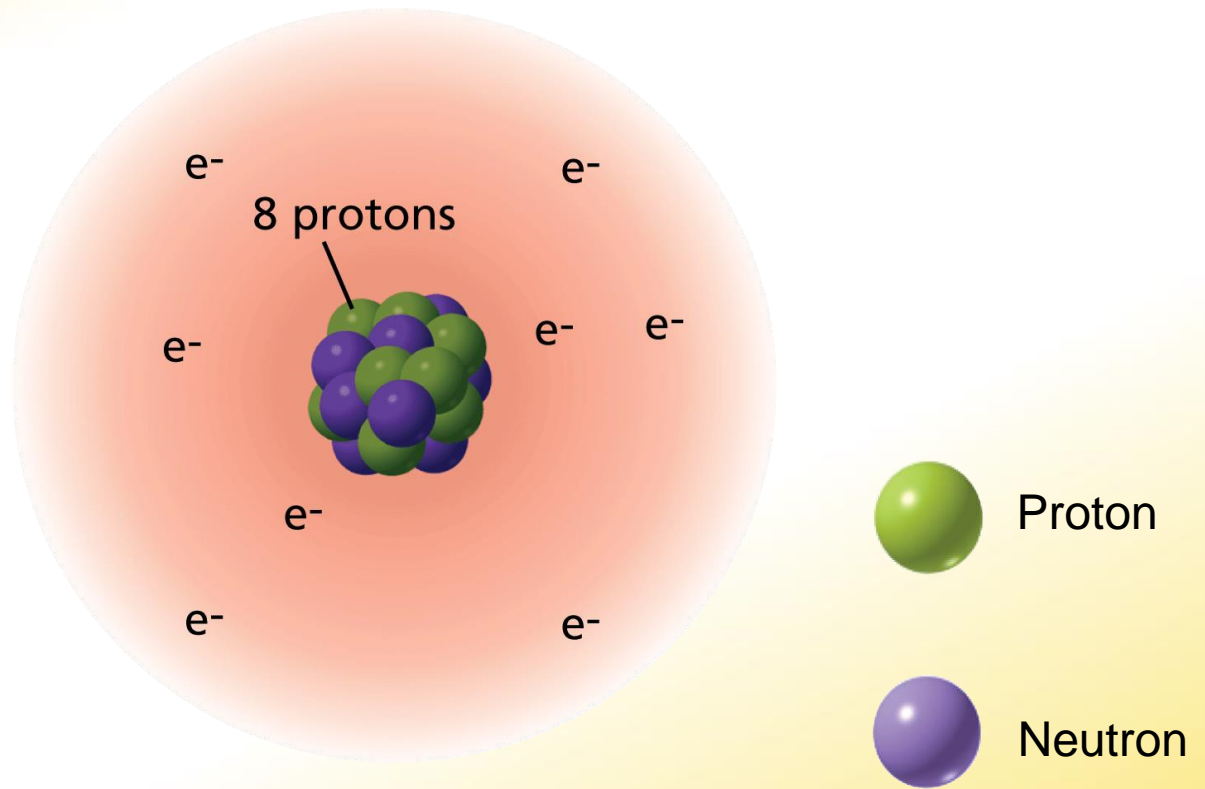
Electric Charge

Electric charge is –

- Protons have –
- Electrons have –

Electric Charge

A neutral atom has –



Electric Charge

The SI unit of electric charge is –

- It takes about -
- A lightning bolt is –
- Camera flash is –

Electric Forces



What determines whether an electric force is attractive or repulsive?

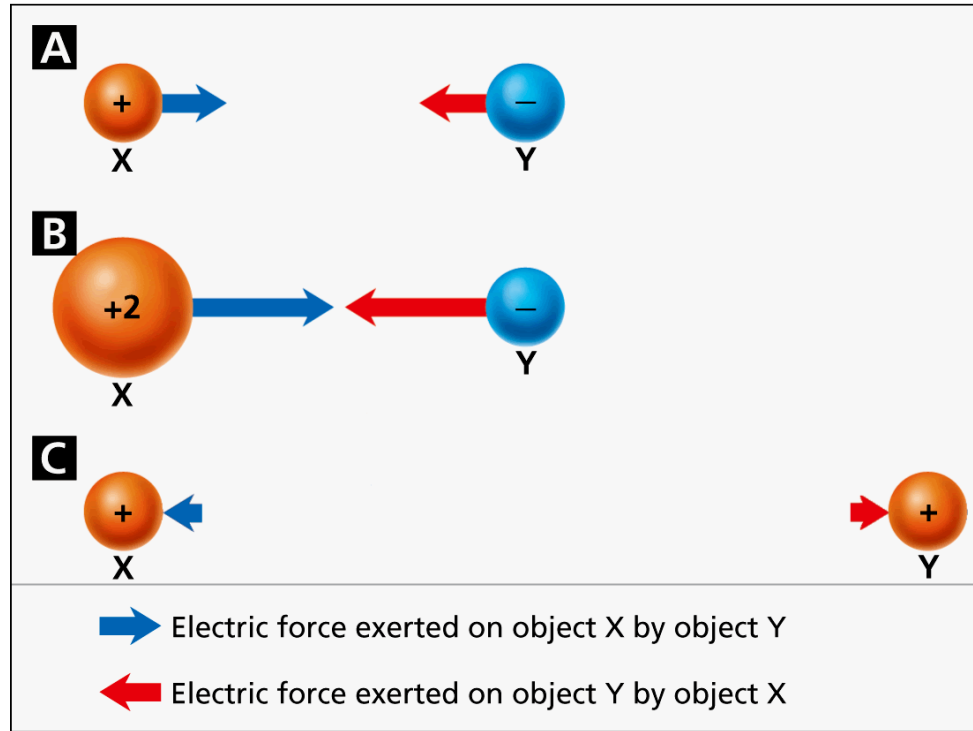
Electric Forces

Electric force is –

- The electric force between two objects is –
- The electric force is –

Electric Forces

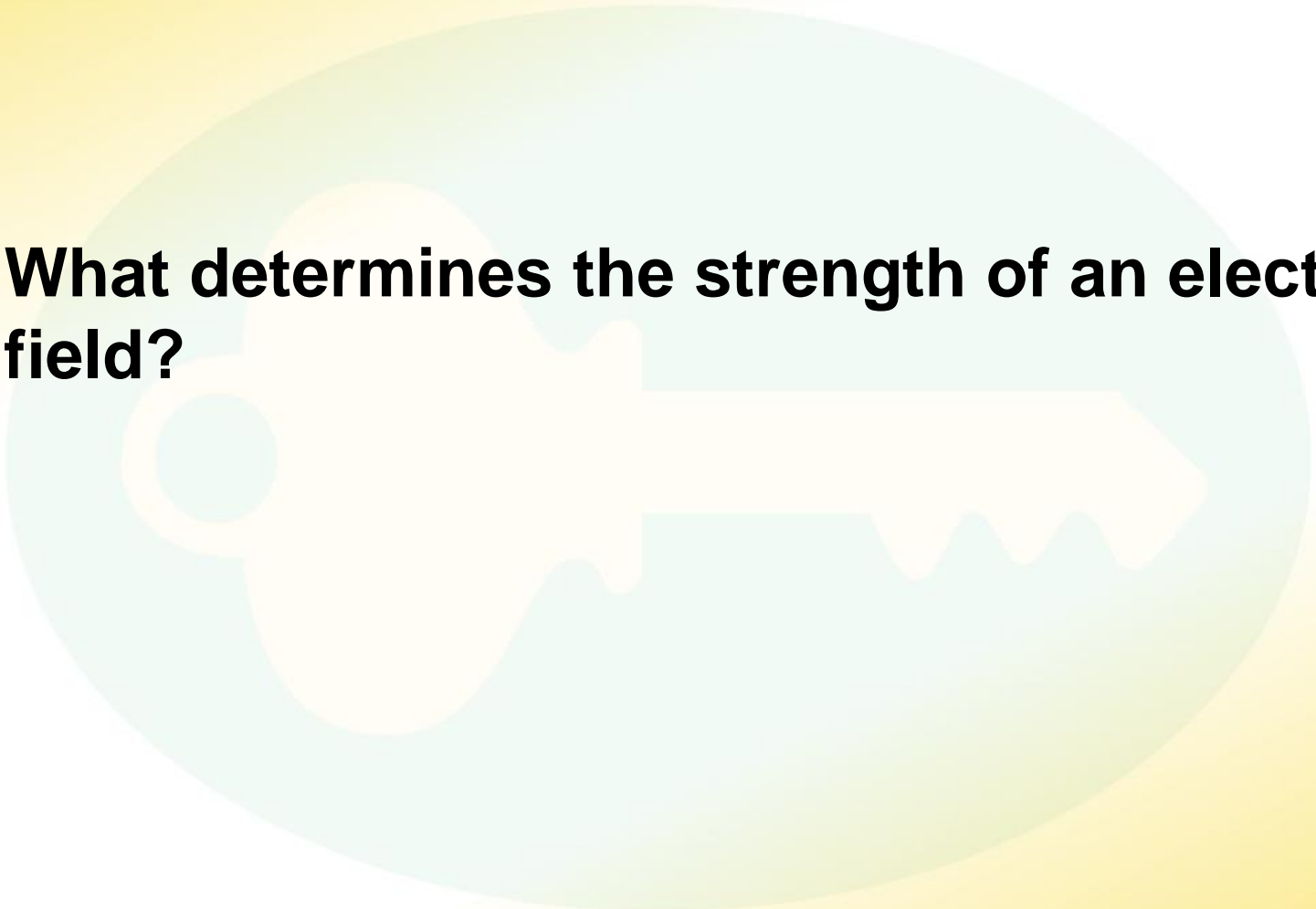
- A. Opposite charges –
- B. Doubling one charge –
- C. Like charges repel. Doubling the distance makes –



Electric Fields



What determines the strength of an electric field?



Electric Fields

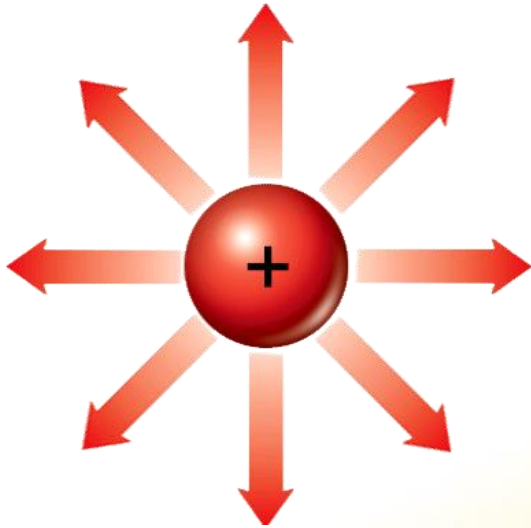
Electric field is –

- An electric field –
- The force depends on –
- The direction of each field line –

Electric Fields

- A. The electric field around a positive charge –
- B. The electric field around a negative charge –

A Field of a positive charge



B Field of a negative charge



Static Electricity and Charging



What are three ways in which charge is transferred?



Static Electricity and Charging

Static electricity is –

According to the **law of conservation of charge** –

Static Electricity and Charging

- A. The balloon attracts the hair –
- B. The hairs repel each other –



Static Electricity and Charging

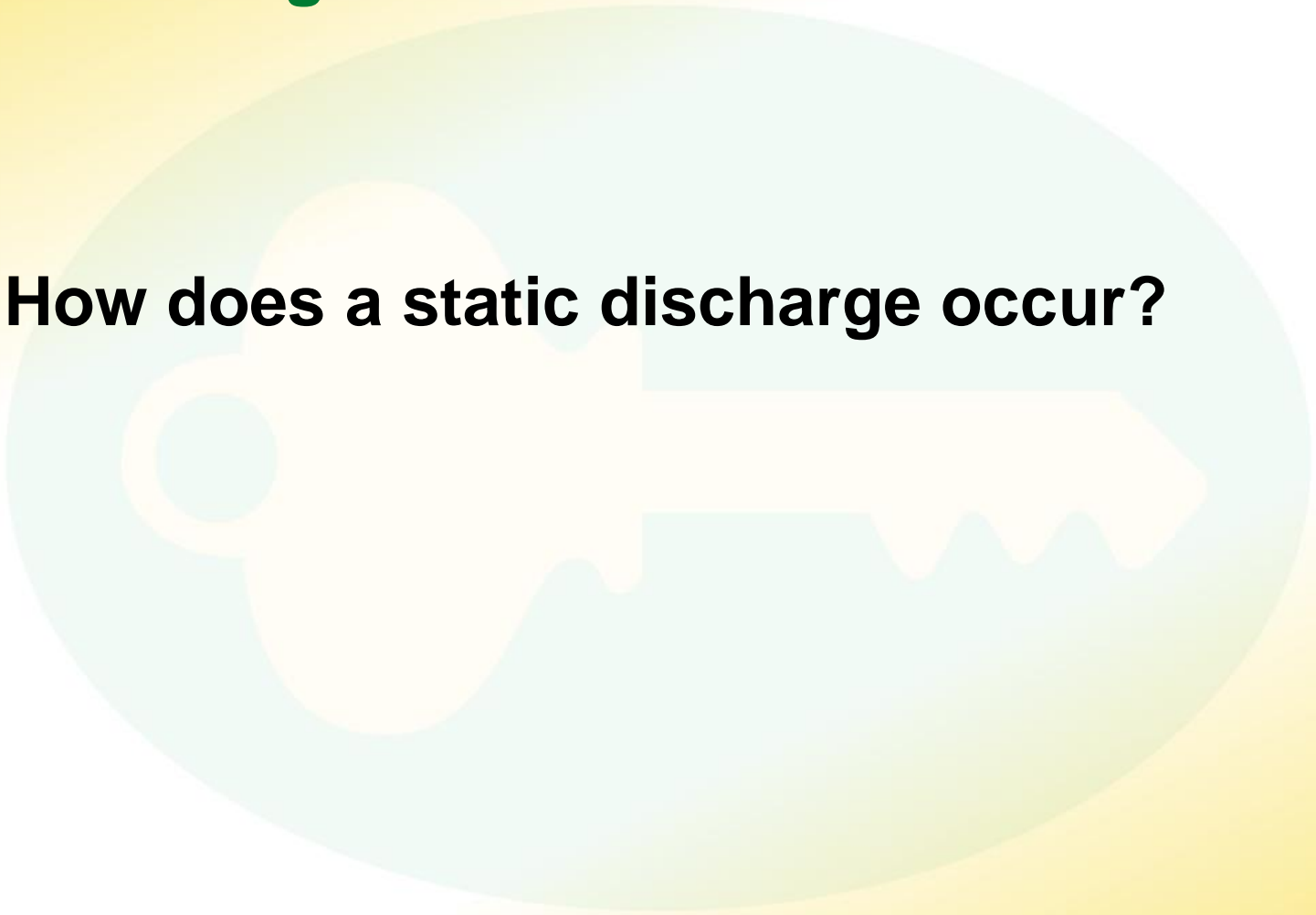
Charging by Induction

Induction is –

Static Discharge



How does a static discharge occur?



Assessment Questions

1. Which of the following would double the electric force between two charged objects?
 - a. doubling the mass of the objects
 - b. doubling the net charge of both objects
 - c. doubling the net charge of one of the objects
 - d. cutting the distance between the objects in half

Assessment Questions

2. The attractive or repulsive effect an electric charge has on other charges in the space around it is the charge's
- electric force.
 - electric field.
 - static electricity.
 - static discharge.

Assessment Questions

3. An object becomes charged by induction when there is a
- transfer of electrons, as the object rubs against another object.
 - transfer of charge, as it contacts another charged object.
 - transfer of charge by motion of electrons within the object.
 - a sudden movement of electric charge from another object.