

WORK – SHEET -2

1. State Coulomb's law. Hence define unit charge.
2. In Coulomb's law, why $(1/4\pi)$ is introduced in the constant factor?
3. What is the value of absolute permittivity of free space?
4. Why the absolute permittivity is called so?
5. Define relative permittivity.
6. "Relative permittivity is sometimes called the specific inductive capacity" Why ?
7. Can we apply Coulomb's law to any type of charge distribution ?
8. Define one coulomb. Is it a large amount of charge or a small amount of charge ?
9. Write down Coulomb's law in vector form.
10. Show that electrostatic force between two charges is an example of a central force.
11. Define electric field.
12. Why the electric force between two charges is an example of action-at-a distance force
13. How many electrons are needed to produce a charge of one coulomb ?

14. When defining the electric field why is it necessary to say that the magnitude of the test charge be very small ?

15. What is electrostatic induction ?