

Physics - 10th Class Physics English Medium Chapter 13 Preparation

Q1. Difference between Electric potential and Potential energy.

Ans 1: Electric potential :

Electric potential is a characteristic of the field of source charge and is independent of a test charge that may be placed in the field.

Ans 2: Potential energy: P.E. is characteristic of both the field and test charge. It is produced due to interaction of the field and the charge placed the field.

Q2. What the body of an aeroplane get charged during flight?

Ans 1: During flight, body of an aeroplane gets charged due to frictional forces.

Q3. Define Farad.

Ans 1: If one coulomb of charge given to the plates of a capacitor produces potential difference on one volt between the plates of the capacitor then its capacitance would be one farad.

Farad is a large unit, usually we use a smaller unit called micro farad and bico farad etc.

Q4. Define capacitance of capacitors. Write its expression and S.I. unit.

Ans 1: Capacitance of capacitors: The ability of a capacitor to store the charge is called capacitance.

SI unit of capacitance is Farad which is equal to CV-1

Q5. Differentiate between fixed and variable capacitors.

Ans 1: Fixed capacitor: Fixed capacitor is a capacitor whose capacitance remains fixed. For example; Paper capacitor and Mica capacitor.

Ans 2: Variable capacitor : Variable capacitor is a capacitor whose capacitance can be changed. for example : Electrolytic capacitor.

Q6. Rubber tires get charged form friction with the road what is the polarity of the charge.

Ans 1: The rubber and road will get opposite charges. The rubber tires get negatively charged.

Q7. How would you define potential difference between two points?

Ans 1: Potential difference between two points as the energy supplied by a unit charge as it moves from on point to the other in the

direction of the field. Its unit is volt.

Q8. Define volt.

Ans 1: If the potential energy of one coulomb of charge at a point in the electric field is one joule, the potential of that point will be one volt.

Q9. What is meant by electrostatic induction?

Ans 1: In the presence of a charged body, an insulated conductor develops positive charge at one end and negative charge at the other end. This process is called electrostatic induction.

Q10. How is an electric field helpful for some animals?

Ans 1: Some animals produce an electric field to detect nearby objects that affect the field.
