

Definitions and Concepts for Edexcel Physics GCSE

Topic 11: Static Electricity (Physics Only)

*Definitions in **bold** are for higher tier only*

Definitions marked by “” are for separate sciences only*

***Earthing:** The removal of excess charge by providing a low resistance path for electrons to flow through.

***Electric Field Lines:** Lines representing an electric field, that point in the direction in which a positive charge would experience an electric force. The closer they are, the stronger the field.

***Electric Field:** A region in which a charge will experience a non-contact, electric force. All charged objects have an electric field around them, and this field is stronger the closer you are to the charge.

***Lightning:** A consequence of static charge building up in the clouds. Lightning strikes are caused by the discharge of this charge.

***Like Charges:** When two charges of the same polarity meet, they will repel.

***Parallel Plates:** The electric field between two charged plates is uniform. The field lines are parallel, equally spaced and point from the positive plate to the negative plate.

***Point Charge:** The electric field around a point charge becomes weaker the further away you are. The field lines for a positive charge point radially outwards, whereas the field lines for a negative charge point radially inwards.

***Sparking:** The transfer of electrons between two surfaces that have an imbalance of charges. Sparking can be particularly dangerous in locations such as petrol pumps, and so the pumps must be earthed.

***Static Charge:** The charge caused by an imbalance of positive and negative charges in, or on, an object's surface. It is often caused by electrons being rubbed from one surface onto another.

***Unlike Charges:** When two charges of opposite polarities meet, they will attract.

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