

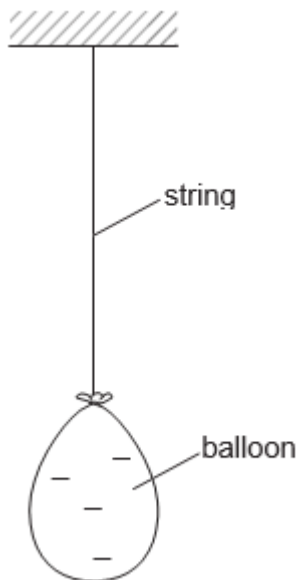
**GCSE Physics B (Twenty First Century Science)**  
**J259/02** Depth in physics (Foundation Tier)

**Question Set 10**

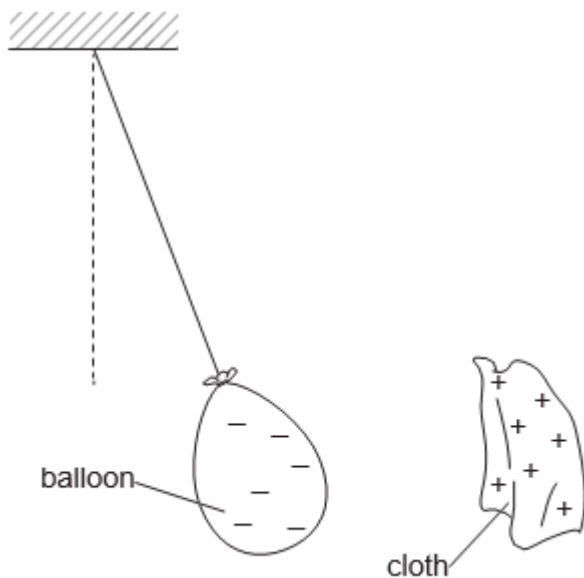
1 This question is about static electricity.

Jack rubs a rubber balloon with a dry cloth. The balloon becomes negatively charged and the cloth becomes positively charged.

He hangs the negatively charged balloon from a long piece of string. The balloon hangs vertically.



He now brings the positively charged cloth close to the balloon. The balloon now hangs at an angle to the vertical.



(a) What is the name of the **field** that surrounds the charged balloon and cloth?

Put a **ring** around the correct answer.

**electric**      **electromagnetic**      **gravitational**      **magnetic**

[1]

(b) Explain why the balloon no longer hangs vertically.

[2]

(c) Jack makes the following comment to explain the charges on the balloon and the cloth.

**Jack**  
The balloon has picked up **atoms** from the cloth.  
The cloth has picked up **protons** from the balloon.



Is Jack correct?

Yes

No

Explain your choice.

[2]

**Total Marks for Question Set 10: 5**

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