



Oxford Cambridge and RSA

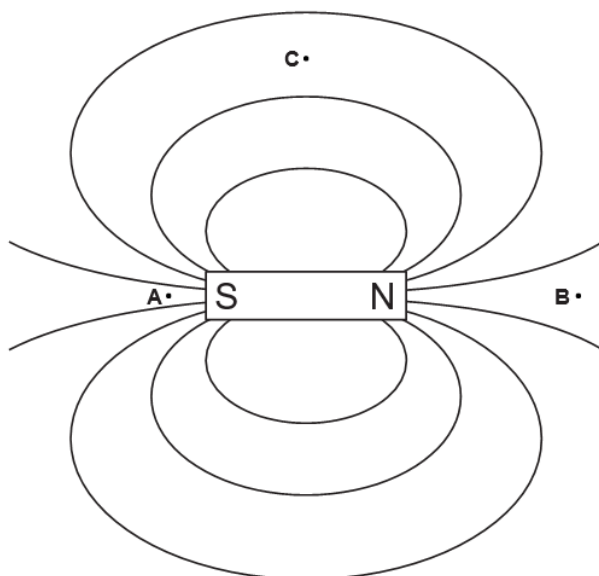
## **GCSE Physics B (Twenty First Century Science)**

**J259/01** Breadth in Physics (Foundation Tier)

### **Question Set 10**

Multiple Choice Questions

- 1 The diagram shows the field around a bar magnet. Three points are labelled **A**, **B** and **C**.



- (a) (i) Where is the field strongest?  
Tick (✓) **one** box.

<b>A</b>	✓
<b>B</b>	
<b>C</b>	

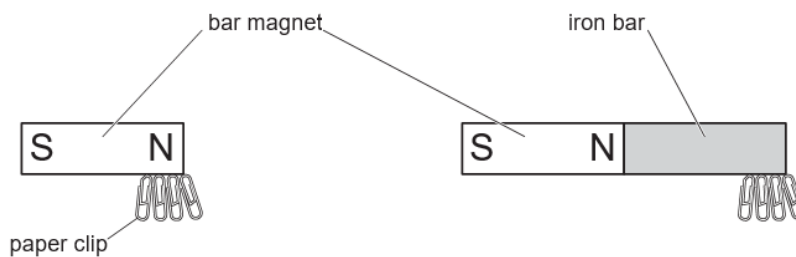
[1]

- (ii) Where would a magnetic compass point to the right?  
Tick (✓) **two** boxes.

<b>A</b>	✓
<b>B</b>	✓
<b>C</b>	

[1]

- (b) The bar magnet can pick up paper clips.  
An iron bar can also pick up paper clips if it is held next to a bar magnet.

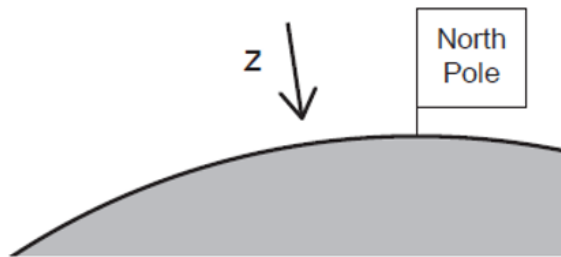


Describe the difference in magnetism between the bar magnet and the iron bar. [1]

The bar magnet is a permanent magnet and the iron bar is an induced magnet

(c) The diagram shows a section through the Earth.

The flag marks the position of the geographic north pole of the Earth.  
The arrow **Z** shows the point at which a compass needle would point vertically down at the surface.



Here are some statements about the Earth's magnetism, some are **true**, and some are **false**.

Put a **tick** (✓) in the correct box after each statement.

	<b>True</b>	<b>False</b>
A compass will always point towards the centre of the Earth.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The Earth's magnetic north pole is in the same place as the Earth's geographic north pole.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
The core of the Earth is magnetic and produces a magnetic field.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The compass points down because the surface at the north pole is covered with iron.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

[2]

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

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