Practice Question Set For GCSE
**Subject : Physics**
**Paper-2 Topic :12_Magnetism And The Motor Effect**

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**Name of the Student**:_____
**Max. Marks : 10 Marks** **Time : 10 Minutes**

**Q1.**

State how a uniform magnetic field may be obtained in a school laboratory.

**(1)**

.....

.....

**(Total for question = 1 mark)**

**Q2.**

Figure 5 shows a current-carrying wire between the poles of a magnet.

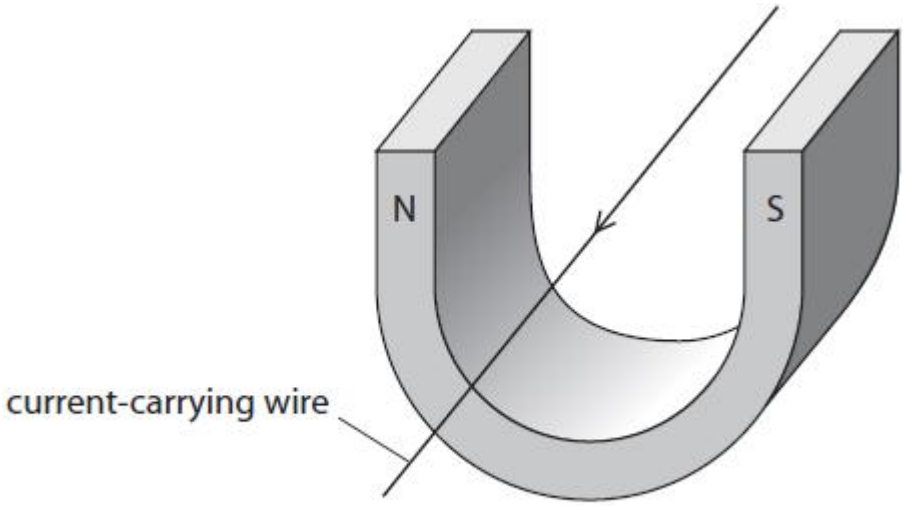


**Figure 5**

(i) The magnet and the wire each experience a force when there is a current in the wire.

**(2)**

1 State the direction of the force on the wire.

.....

2 State the direction of the force on the magnet.

.....

(ii) The force on the wire is 0.15 N.

The current in the wire is 2.7 A.
The magnet produces a field with a magnetic flux density of 0.50 T.
Calculate the length of the wire in the magnetic field.
Use an equation selected from the list of equations provided.

**(2)**

length of the wire in the magnetic field = ..... m

**(Total for question = 4 marks)**

**Q3.**

A student has a bar magnet, a piece of iron the same size as the magnet, and some paper clips.

Describe how the student could use these items to demonstrate temporary induced magnetism.

**(3)**

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**(Total for question = 3 marks)**

**Q4.**

Wooden trucks on a toy railway have permanent magnets that hold the train together.

The magnets are arranged so that an N-pole touches an S-pole between each truck, as shown in Figure 15.

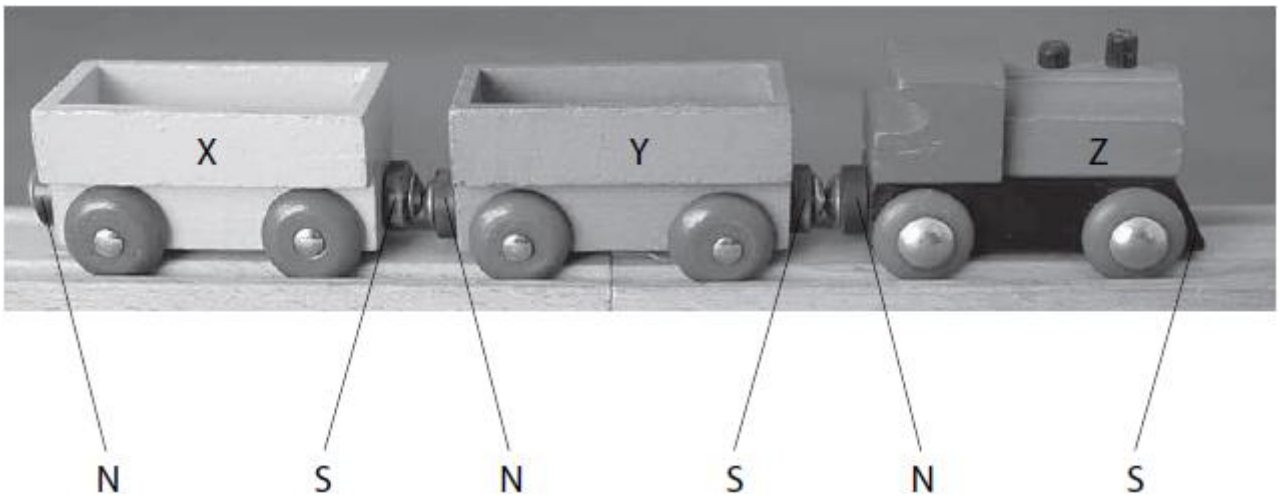



**Figure 15**

(a) Truck Y is removed from the train, turned through 180° and is then replaced between truck X and Z.
How does this affect the train?

**(1)**

- ☒ **A** Y attracts both X and Z as before
- ☒ **B** Y still attracts X but now repels Z
- ☒ **C** Y still attracts Z but now repels X
- ☒ **D** Y now repels both X and Z

(b) The structure of a truck, seen from above, is shown in Figure 16.
The permanent magnets cause a magnetic field both inside and outside the truck.

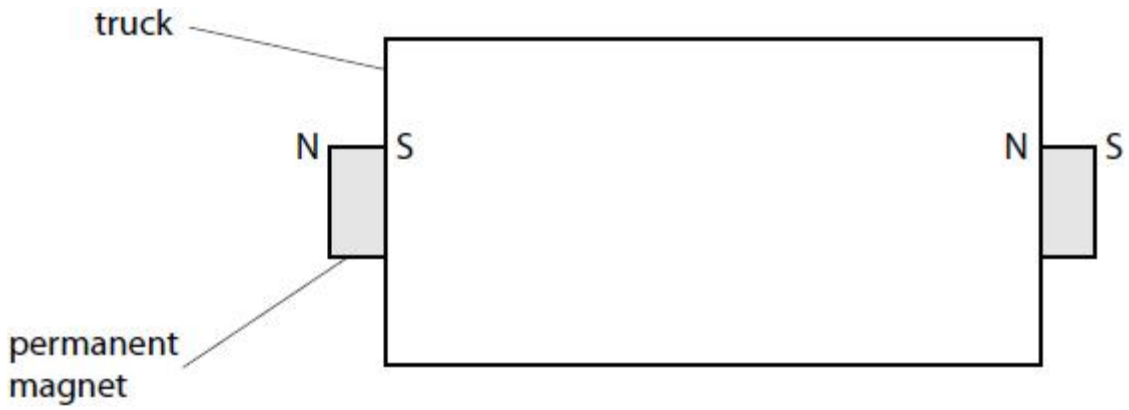
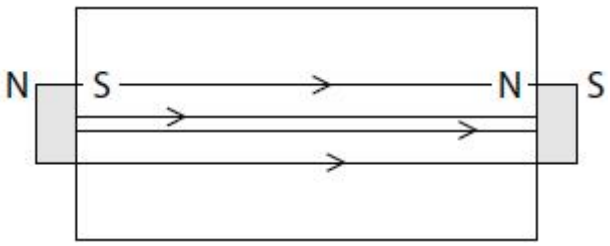



**Figure 16**

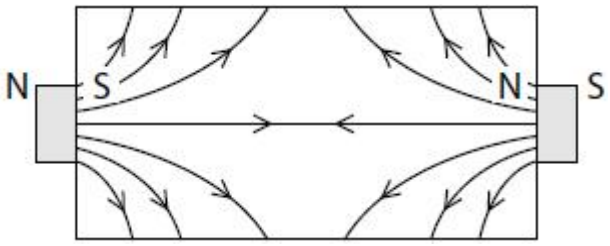
Which of these correctly shows the field inside the truck?

**(1)**

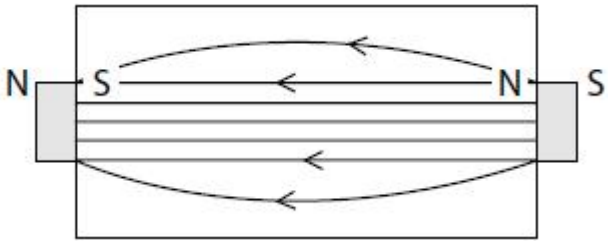
☒ **A**



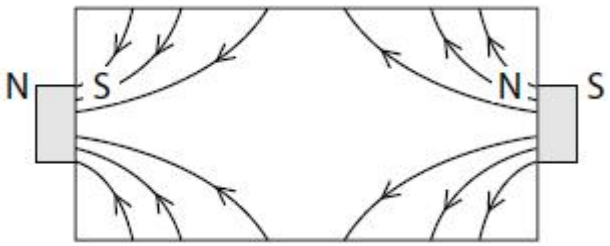
☐ **B**




☐ **C**




☐ **D**




**(Total for question = 2 marks)**