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Marks:

## Magnetic Field Patterns

### Q1.

Draw the magnetic field patterns for each of the following

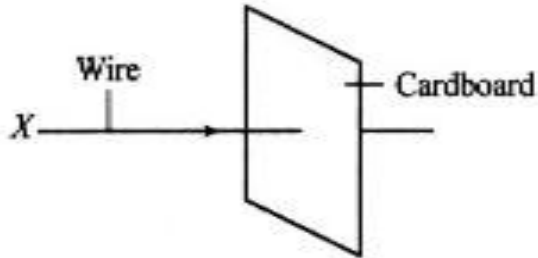


Figure 1

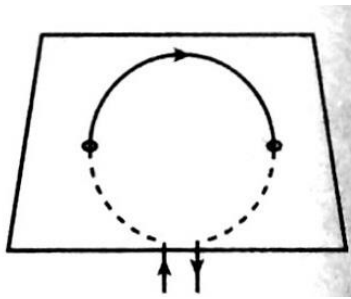


Figure 2

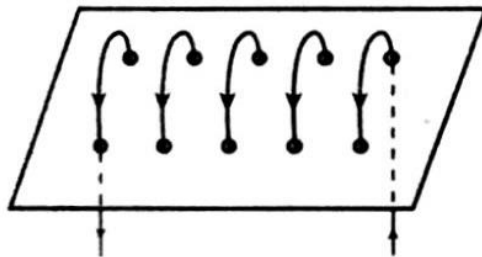


Figure 3

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**Q2.**

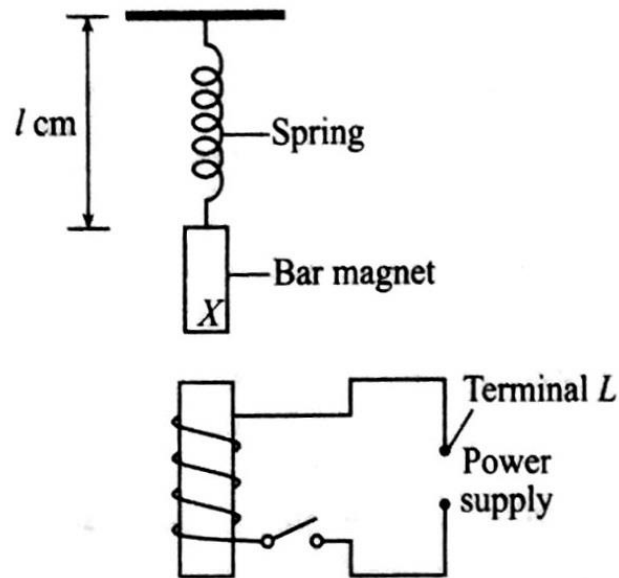
Draw the magnetic field patterns for each of the following

The diagram shows five magnetic field configurations arranged in a grid-like pattern within a large green-bordered box:

- Top center: A single solid black dot.
- Middle left: A single solid black dot.
- Middle right: A single blue circle with a cross inside (representing a dot).
- Bottom left: A vertical column of five solid black dots.
- Bottom right: A vertical column of five blue circles with crosses inside (representing dots).

Signature: Name: Marks: **Q3.**

The figure below shows a vertical spring with a bar magnet hanging at the lower end. An electromagnet is placed below the bar magnet. The length of the spring is 1 cm. When the switch is closed, the length of the spring became shorter. Which of the following statements is true about pole X of the bar magnet and terminal L of the power supply?



	Pole X	Terminal L
<b>A</b>	North	Either positive or negative
<b>B</b>	South	Either positive or negative
<b>C</b>	South	Negative only
<b>D</b>	North	Negative only

Figure 4

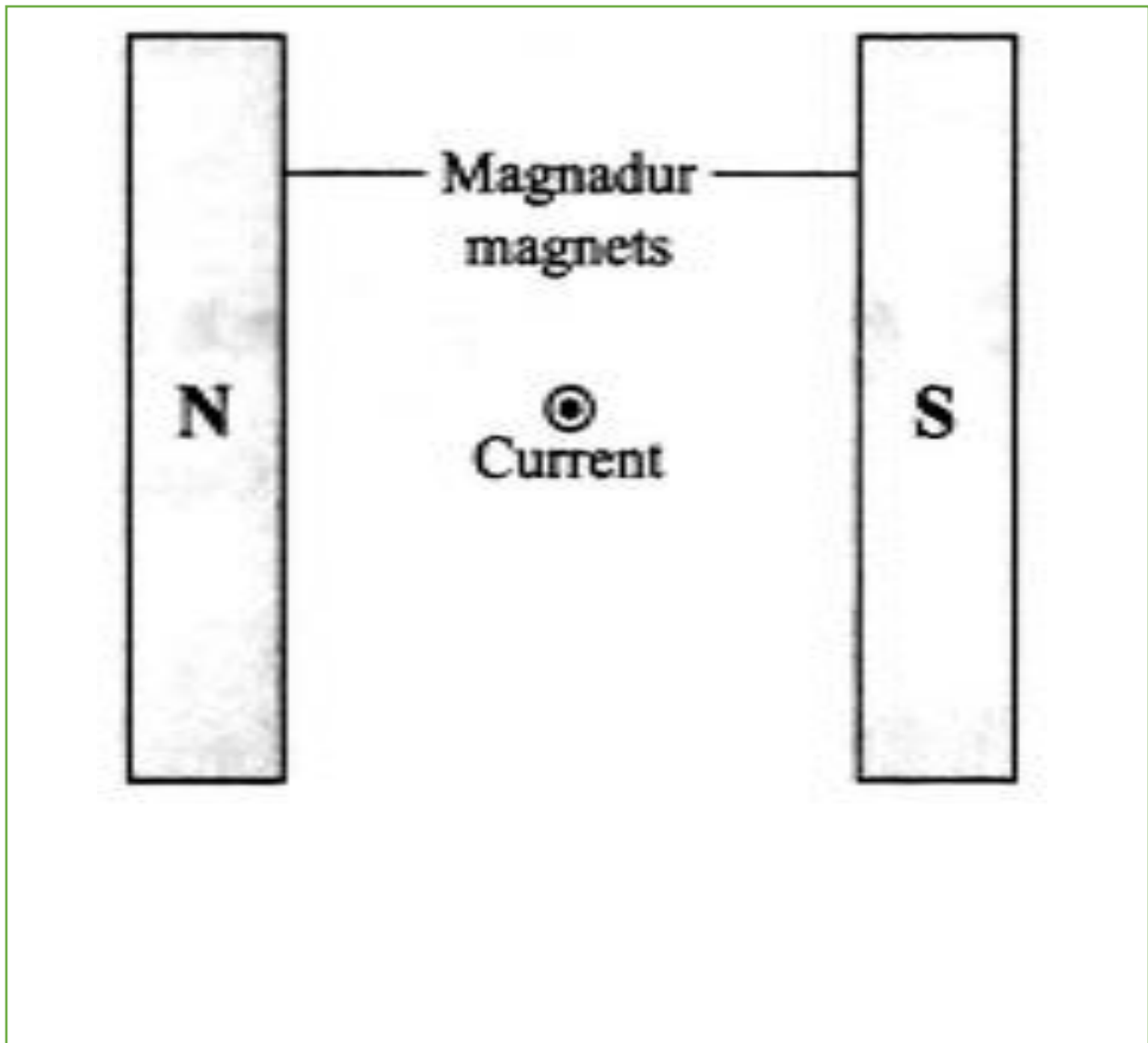
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**Q4.**

In the figure below, opposite poles of a pair of magnetur magnets face each other with a current-carrying conductor in the magnetic field. The current flows out of the paper. On the figure, draw the resultant catapult field.



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