

1. Nyatakan sifat-sifat magnet. (TP 1)
State the characteristics of magnet.

- Has north pole and [] pole.
- Can [] magnetic substances.
- Point to the direction of north and south when suspended []
- Like poles [], unlike poles attract.

south

freely

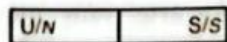
repel

attract

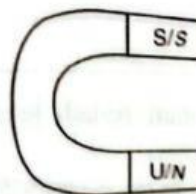
Medan Magnet Magnetic Field

2. Lukis corak dan arah medan magnet bagi magnet-magnet di bawah. (TP 2)
Draw the pattern and direction of the magnetic field for the magnets below.

(a)



(b)



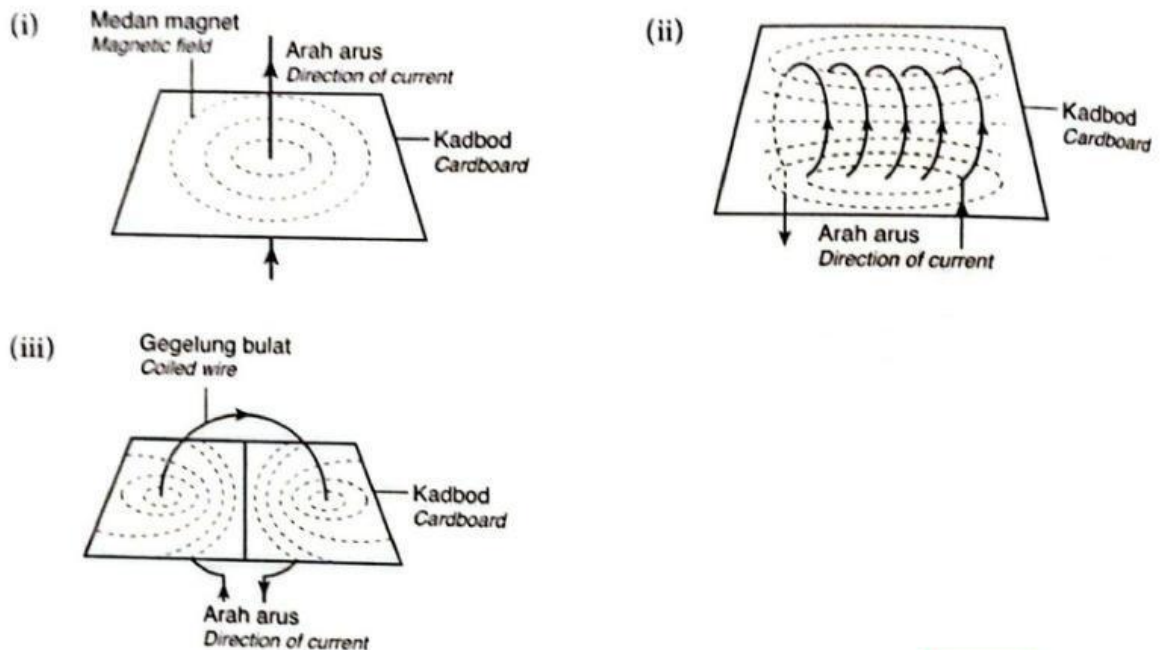
Elektromagnet Electromagnet

3. Ahmad menjalankan eksperimen untuk mengkaji corak dan arah medan magnet yang dihasilkan oleh arus elektrik yang mengalir melalui konduktor yang berbeza.

Ahmad conducts an experiment to investigate the pattern and direction of the magnetic field produced by an electric current that flowing through various conductors.

- (a) Bantu Ahmad mengenal pasti arah medan magnet dalam Rajah 3.1 dengan menggunakan petua genggam tangan kanan. **TP 2**

Assist Ahmad to identify the direction of the following magnetic field in Diagram 3.1 by using the right-hand grip rule.



Rajah 3.1 / Diagram 3.1

- (b) Nyatakan tiga ciri garis medan magnet. **TP 1**
State three characteristics of magnetic field lines.

widely

closer

cross

heads

- Magnetic field lines are to each other at a stronger magnetic field and space at a weaker magnetic field.
- Magnetic field lines do not meet or each other.
- Magnetic field lines from north pole to south pole.

- (c) Apakah yang akan terjadi kepada medan magnet jika arus yang mengalir melaluinya ditambah? **TP 2**

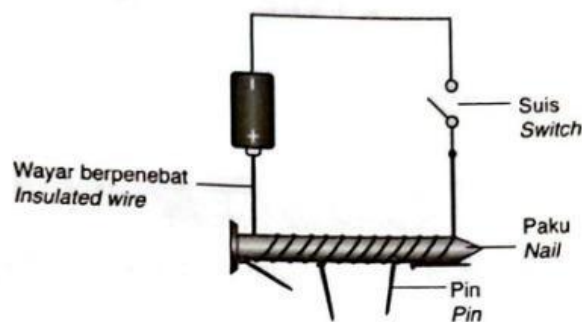
What will happen to the magnetic field if the current flows through it is increased?

When the current is increased, the of the magnet field will also

increase

strength

- (d) Ahmad membina solenoidnya seperti Rajah 3.2.
Ahmad built his solenoid as in Diagram 3.2.



Rajah 3.2 / Diagram 3.2

- (i) Pada pendapat anda, mengapakah pin melekat pada gelungan wayar semasa suis dihidupkan? **TP 5**

In your opinion, why are the pins attracted to the coil of wire when the switch is turned on?

KBAT Menilai

When the switch is turned on, an [] current flow through the coil of wire. This will turn the coil into an [] that is able to [] the pins.

electromagnet

attract

electric

- (ii) Cadangkan dua cara untuk menambah bilangan pin yang melekat pada gelungan wayar. **TP 5**

Suggest two ways to increase the number of pins that sticks to the coil of wire.

KBAT Menilai

- Increase the [] of turns of wire [] numbers [] voltage
- Increase the [] of the electrical supply.

- (iii) Senaraikan empat peralatan di rumah anda yang menggunakan elektromagnet. **TP 4**

List four items in your household that use electromagnet.

KBAT Menganalisis