

## S.2 PHYSICS | REVISION QUESTIONS

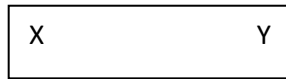
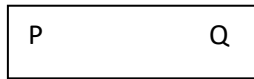
### TOPIC: Magnets

Attempt the Questions and submit Work for Marking on the eLearning Platform [Q & A Forum](#) or to Mr. Ssendawula (WhatsApp : 0700 37

1. Which of the following statements is not true about magnets ?

- A. Magnetic poles cannot be separated.
- B. A paramagnetic material is a material from which strong magnet can be made.
- C. The neutral point in a magnetic field is a point where there is no force experienced.
- D. Heating a magnet can reduce its magnetism .

2.



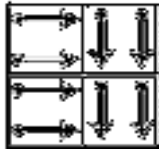
The figure above shows magnetic field lines between two magnetic poles. The poles marked P, Q, X and Y are respectively;

- A. north, south, south and north
- B. south, north, north and south
- C. north, north, south and north
- D. south, south, north and south

3. Which of the following statements are correct ?

- (i) The particles of magnetic materials are tiny magnets.
  - (ii) The particles in unmagnetised iron arrange themselves in closed chains.
  - (iii) The particles in a magnet are arranged in open chains with *N* pole of one particle against the *S* pole of its neighbouring particle.
  - (iv) Groups of atoms form a magnetic domain.
- A. (i), (ii) and (iii) only.                      C. (ii) and (iv) only.
- B. (i), (iii) and (iv) only.                      D. (iv) only.

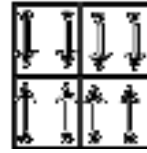
4. Which of the following shows a piece of material in a magnetized condition?



**A.**



**B.**



**C.**



**D.**

5. A magnetic material can be magnetized by

- (i) stroking with a permanent magnet.
- (ii) using a direct current.
- (iii) by induction.

**A.** (i) only.

**C.** (ii) and (iii) only.

**B.** (i) and (ii) only.

**D.** (i), (ii) and (iii).

6. Which of the following statements are true about magnets?

- 1. Magnets always have opposite polarities
- 2. A magnet can be used as a **compass**
- 3. Repulsion is the only sure test a magnet.
- 4. Magnets attract all metals.

**A.** 1, 2, 3 are correct

**B.** 1, 3 only are correct

**C.** 2 only are correct

**D.** 4 only are correct.

7. Figure 2 shows the superposition of the earth's magnetic field due to a magnet.

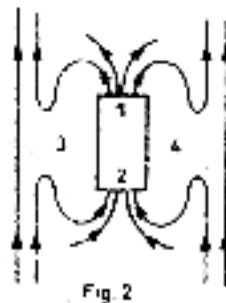


Fig 2

Identify points marked 1, 2, 3 and 4.

	1	2	3	4
A.	South pole	North pole	Neutral point	Neutral point
B.	North pole	South pole	Neutral point	Neutral point
C.	Neutral point	Neutral point	North pole	South pole
D.	Neutral point	Neutral point	South pole	North pole

8. Permanent magnets are made from

- A. diamagnetic materials                      C. paramagnetic materials.  
 B. ferromagnetic materials                    D. dielectric materials.

9. Which of the following statements is/are true **about** molecular theory of magnetism?

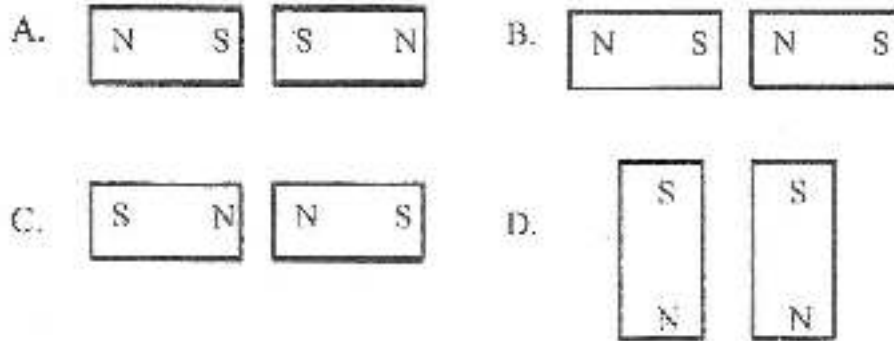
1. Breaking a magnet into two results to the formation of twomagnets.
2. Heating and rough treatment destroys magnetism.
3. The poles of a magnet are of equal strength.
4. The lines of force travel from a north pole towards a south pole.

- A. 1, 2, 3 only are correct.                    **C** 2, 4 only are correct.  
 B. 1, 3 only are correct.                    **D** 4 only is correct.

10. Which of the following is not a vector quantity

- A. Magnetic flux  
 B. Momentum  
 C. Pressure  
 D. Weight

11. The diagrams show different arrangements of two strong magnets. Which pair of magnets V will pull each other.



12. Which of the following statements is correct about soft ferromagnetic materials

- (i) they don't lose their magnetism easily
- (ii) they are easily and strongly magnetized
- (iii) they are used to make permanent magnets

- A. (i) and (ii) only      B. (ii) and (iii) only  
C. (ii) only              D. (iii) only

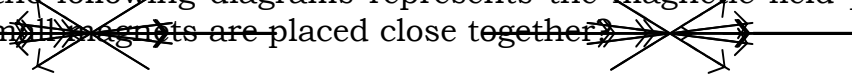
13. To test whether a piece of metal is a magnet or not, one would see if it

- A. attracts steel and iron fillings.
- B. attracts a magnet.
- C. repels a known magnet.
- D. repels a metal bar.

14. The earth behaves as if it contains a short but a powerful bar magnet with;

- A. it's north pole in the southern hemisphere.
- B. it's north pole in the northern hemisphere.
- C. it's north pole in east - west direction.
- D. no poles.

15. Which one of the following diagrams represents the magnetic field pattern when two small magnets are placed close together?



- A.  B. 
- C.  D. 

16. Which one of the following substances would be strongly attracted by a magnet?

- A. Aluminium B. Magnesium  
C. Copper D. Nickel

17. Which of the following is not a property of magnetic field lines?

- A. They start from North Pole to South Pole.  
B. They don't cross each other.  
C. They start from South Pole to North Pole.  
D. They attract each other if they are of opposite poles.

18. Soft magnetic materials are materials which;

- A. Can be magnified easily.  
B. Can retain their magnetism for a long time  
C. Can break easily  
D. Cannot be attracted by a magnet.

## ESSAY

1. Define the terms;

(i) **magnetic saturation**

(ii) **magnetic field**

(iii) **neutral point**

2. (a) Define **magnetic induction**.
- (b) Draw a diagram to show how a steel bar can be magnetized by single stroke method.
  
3. (a) Explain in terms of the domain theory how a steel bar gets magnetised by stroking.
- (b) Describe how a magnet is demagnetized by electrical method.
  
4. What is meant by the following;
  - (i) Hard magnetic material.
  - (ii) Soft magnetic material
  
5. (a) Explain how a piece of iron can be magnetised by the single touch method. Illustrate your answer with a diagram.
- (b) How can you determine the polarity of a magnet?