

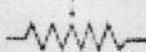
DEPARTMENT OF GENERAL EDUCATION
ANNUAL EVALUATION - MARCH 2012

Class :IX
Cool of Time : 15 minutes

Max.marks :40
Time :90 minutes

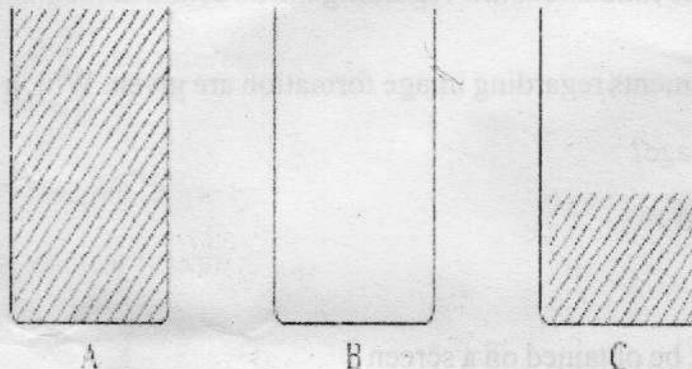
PHYSICS

1. Match the items in column A, B and C suitably

A Symbol	B Device	C Use
	Rheostat	Device to measure voltage
	Ammeter	To maintain potential difference
	Cell	To change the current
	Voltmeter	To measure current

3

2. Three flower vases of the same size are shown in the figure



- (a) Which of these is more stable? (1)
(b) What will you do to make another flower vase which has greater stability? (1)

3 Find out the relationship of the given pair and complete the other.

kg m/s^2 : N

Nm :

(1)

$\frac{25}{10} = 2.5$
 $\frac{25}{10} = 2.5$

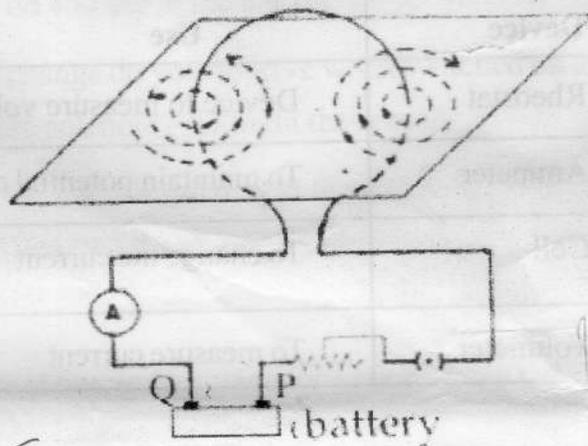
4 An object placed 20 cm away from a convex lens gives a virtual image 100 cm away from it.

(a) What is the focal length of the lens? $\text{Power} = \frac{1}{f}$ (2)

(b) Calculate the power of the lens. (2)

$\frac{25}{10} = 2.5$
 $\frac{100}{20} = 5$
 $\frac{100}{20} = 5$

5. The magnetic field around a current carrying coil is depicted.



(a) Which is the positive terminal of the battery? (1)

(b) State the fundamental law regarding the direction of magnetic field depicted. (1)

6. Some statements regarding image formation are given. Which of them are related to a virtual image?

(a) Inverted ✓

(b) Erect ✓

(c) Cannot be obtained on a screen

(d) Can be obtained on a screen ✓

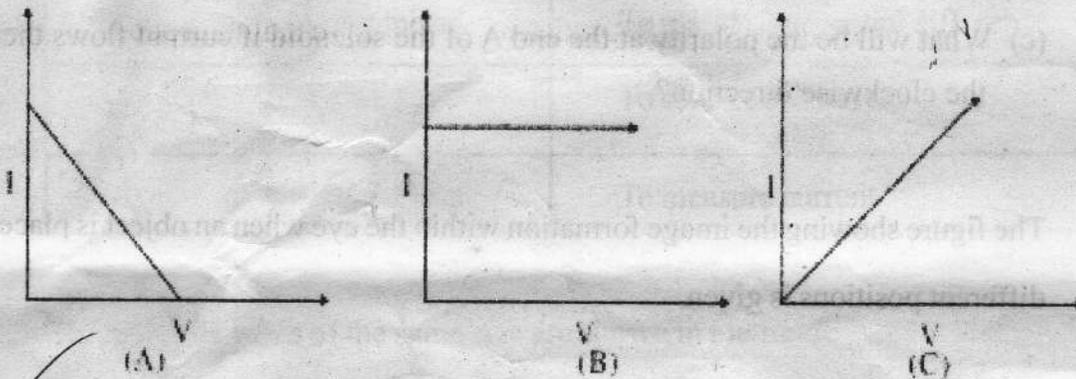
(e) The distance to image cannot be measured directly

(f) The position of object and that of image are on the same side. (2)

(g) Formed by the actual meeting of the rays of light ✓

7. The earth and an aeroplane flying in the sky will attract each other.
- (a) If the force of attraction from the earth on the aeroplane is compared to that on the earth from the aeroplane, which of the following is true?
- The force of attraction on the aeroplane by the earth is higher.
 - The force of attraction on the earth by the aeroplane is higher.
 - Both are equal
 - The force of attraction on the earth by the aeroplane is lower. (1)
- (b) If the aeroplane stops functioning, it will fall on the earth. Why does it happen like this alone? (2)

8. Observe the given graphs



- (a) Which is the graph that denotes Ohm's law? (1)
- (b) Explain the reason for your inference. (1)

9. Complete the following properly.

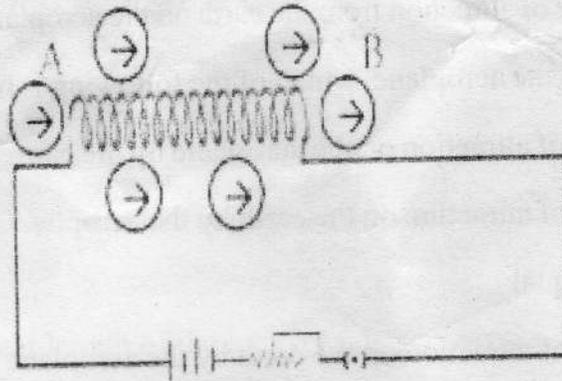
In the sun : nuclear fusion

In the plants : (1)

10. Three resistors of 6Ω each are given.

- (a) In which way are they to be connected to get effective minimum resistance? (1)
- (b) Draw the circuit showing the three resistors in parallel and calculate the effective resistance, (3)

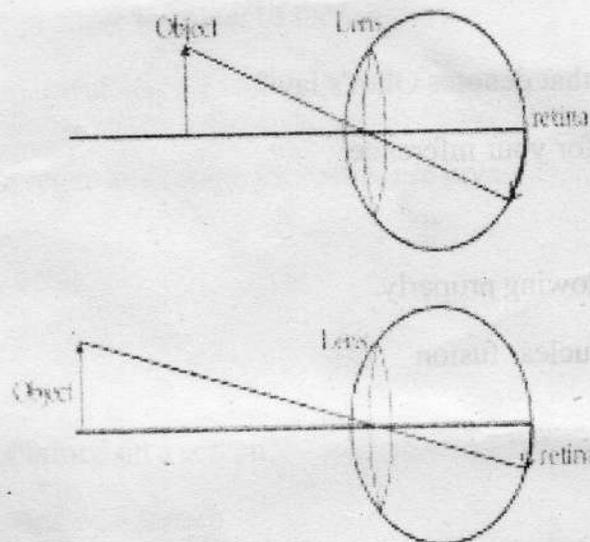
11.



The figure shows the arrangement of magnetic compasses placed around a solenoid.

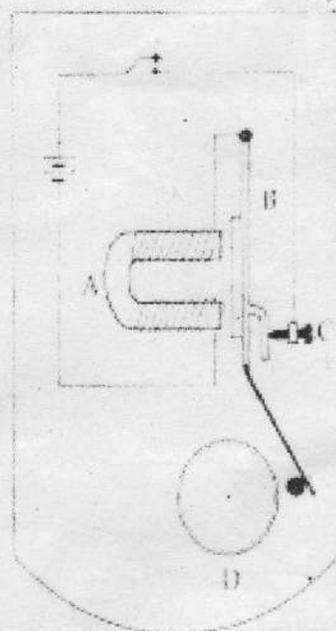
- (a) What do you see at the instant the circuit is switched on. (1)
- (b) What change do you observe when switched on after inserting a soft iron core into the solenoid? Explain the reason. (2)
- (c) What will be the polarity at the end A of the solenoid if current flows there in the clockwise direction? (1)

12. The figure showing the image formation within the eye when an object is placed at different positions is given.



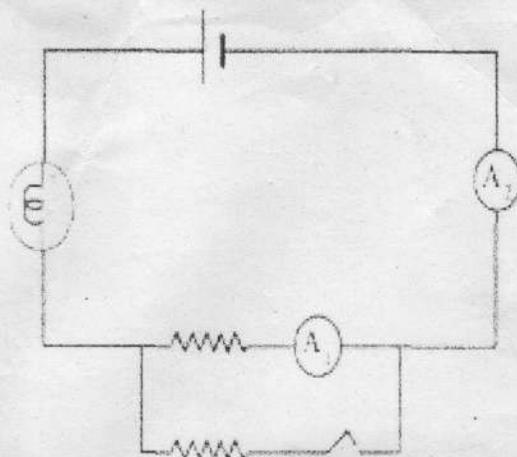
- (a) Where is the image formed in both instances? (1)
- (b) Explain how the image formed at the same distance from the lens in both cases. (2)
- (c) Write two reasons for the near sightedness. (1)

13. The diagram of an electric bell is given.



- (a) Which is the electromagnet in it? (1)
- (b) What arrangement is there to make the bell work continuously? (1)
- (c) Can you use steel instead of soft iron core? Why? (2)

14. Observe the circuit



- (a) The reading of ammeter A_1 is 1 A when the switch is off. If so what will be the reading of ammeter A_2 ? (1)
- (b) What change do you see in the ammeter reading when you turn the switch on? Specify the reason. (3)