

CHAVAKALI HIGH SCHOOL

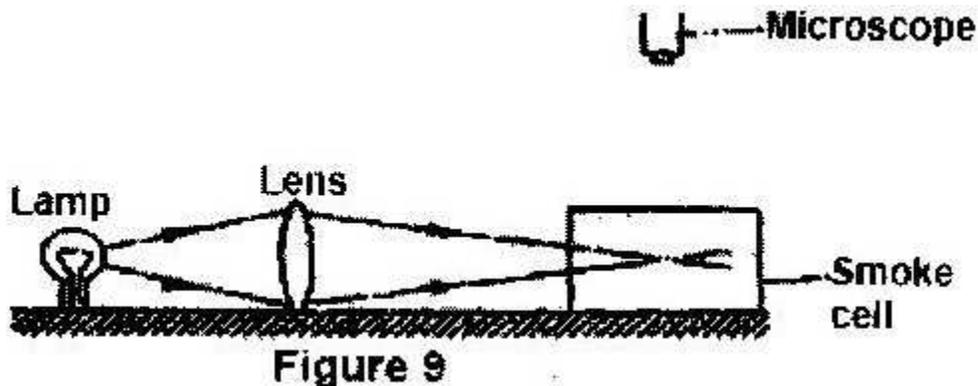
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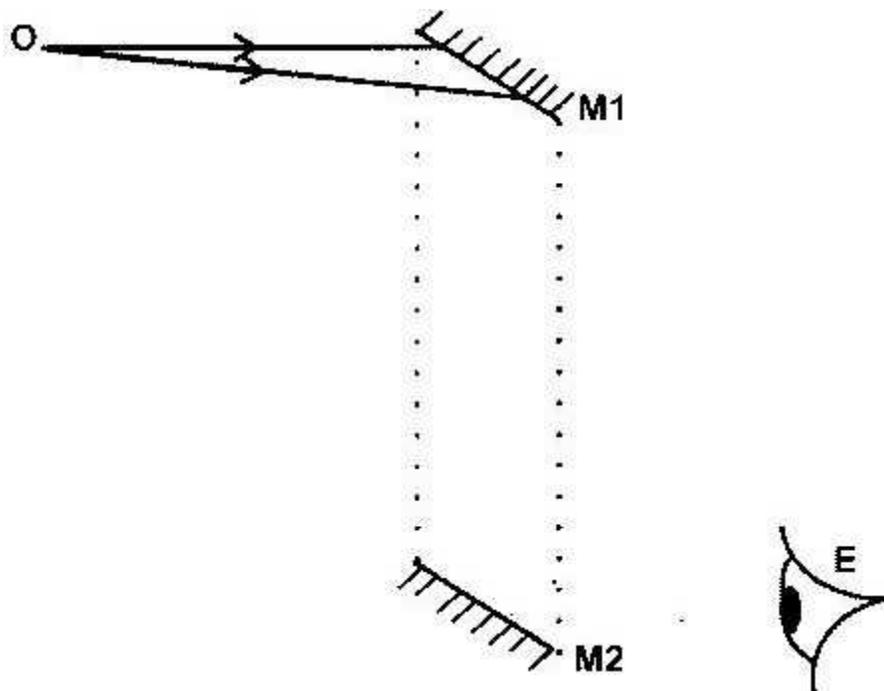


PHYSICS FORM TWO HOLIDAY ASSIGNMENT 2020

1. State the reason for the rise in the levels of the liquids when air is sucked from the tubes (1 mark)
2. Given that the density of liquid B is 1200 kgm^3 , determine the density of liquid A. (3 marks)
3. Brownian motion of smoke particles can be studied by using the apparatus shown in figure 9. To observe the motion, some smoke is enclosed in the smoke cell and then observed through the microscope.

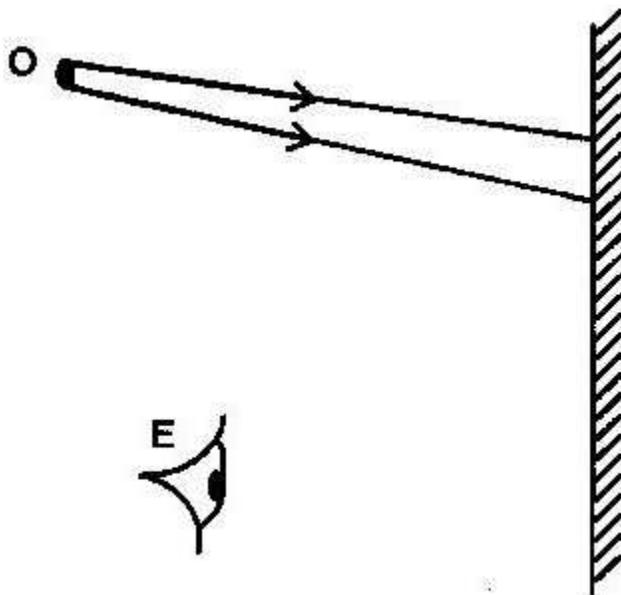


- (a) Explain the role of the smoke particles, lens and microscope in the experiment. (6 marks)
 - (b) State and explain the nature of the observed motion of the smoke particles. (3 marks)
 - (c) State what will be observed about the motion of the smoke particles if the temperature surrounding the smoke cell is raised slightly. (1 mark)
4. What is meant by a virtual image?
5. The figure below shows an object O being viewed using two inclined mirrors M1 and M2.



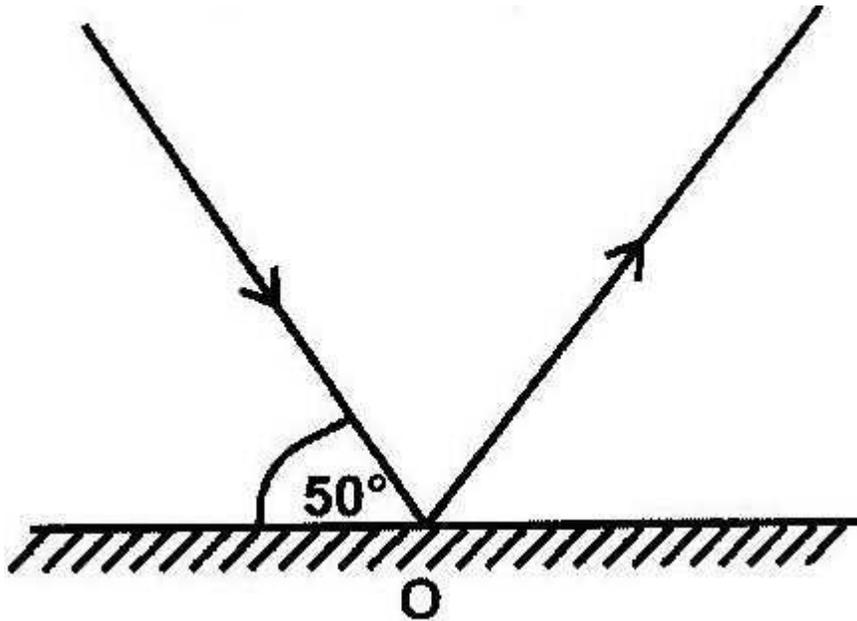
Complete the diagram by sketching rays to show the position of the image as seen by the eye E

6 The figure below shows an object O placed in front of a plane mirror



On the same diagram, draw rays to locate the position of the image 1 as seen from the eye E.

7. The diagram shows a ray of light incident on a plane mirror at point O.



The mirror is rotated clockwise through an angle of 30° about an axis perpendicular to the paper. Determine the angle through which the reflected ray rotate

8. A student learnt that a battery of eight dry cells each 1.5V has a total e.m.f of 12V the same as a car battery. He connected in series eight new dry batteries to his car but found that they could not start the engine.

Give a reason for this observation

9. Distinguish between a primary cell and a secondary cell.

10. A current of 0.08A passes in a circuit for 2.5 minutes. How much charge passes through a point in the circuit?

11a) Define the term current and state its SI Unit

(2mks)

b) A charge of 2000 coulombs passes through a point in a circuit in 30 minutes- calculate the current in the circuit

(3mks)

12. Explain how to charge a leaf electroscope negatively by Induction

(5mks)

13. Why are metal chains attached to the trucks carrying petrol or other inflammable materials (2mks)

14. State the basic law of charges (1mk)

15. Describe with a suitable labeled diagram, the formation of a total solar eclipse (3mks)

16. State three characteristics of images formed by plane mirrors (3mks)

17. Sketch the magnetic field pattern in the space between the poles.

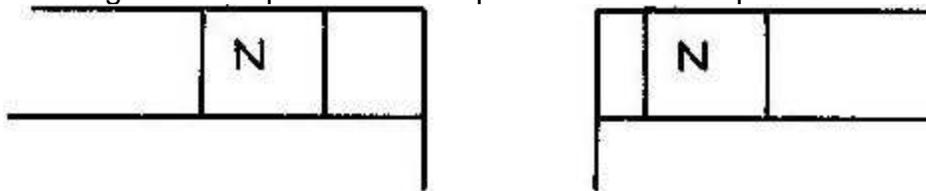


Figure 7

(2 marks)

18. Figure 2 shows a horse-shoe magnet whose poles are labeled and two other magnets near it. Iron nails are attracted to the lower ends of the magnets as shown.

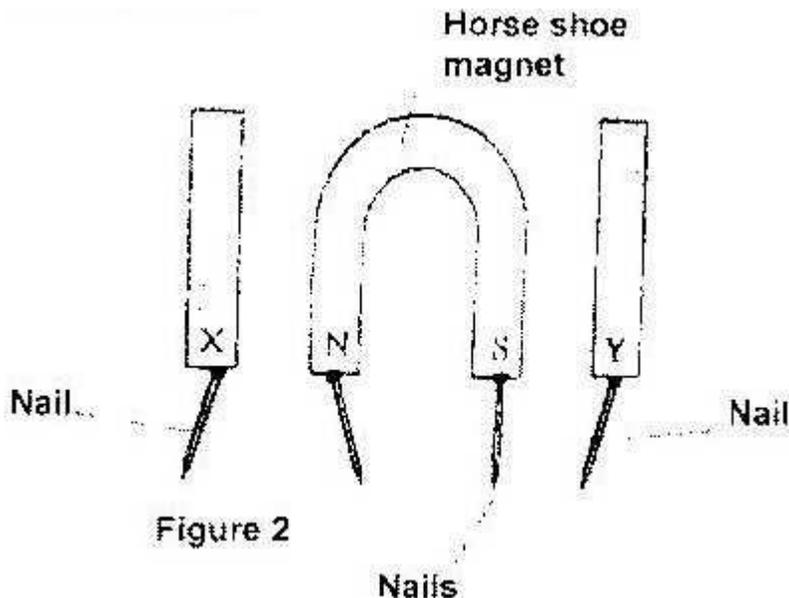
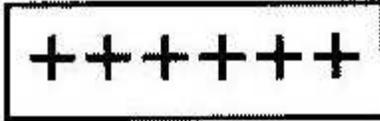


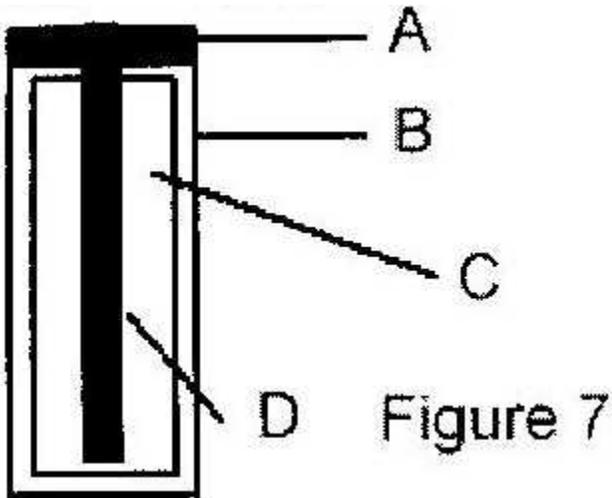
Figure 2

Identify the poles marked X and Y. (2 marks)

19. Sketch the electrostatic field pattern due to the arrangement of the charges shown in fig 6 (1 mark)



20. Fig 7 shows the features of a dry cell (Leclanche) use the information in the figure to answer question 20a and 20b



- (a) Name parts A, B, C, D
- (b) Explain the purpose of B