

City International School

FIRST TERMINAL EXAMINATION – 2013 - 2014

Date : 01/08/2013

Std : VIII

Subject : Physics (Paper I)

Marks : 80

Time : 2hrs

Answer to this question must be written on the paper provided separately.

You will not be allowed to write during the first 15 minutes.

This time is spent in reading the question paper.

The time at the head of this paper is the time allowed for writing the answers.

Attempt all questions from SECTION A and four questions from SECTION B.

The intended marks for questions or parts of questions are given in the bracket. ()

SECTION A [40 MARKS]

Attempt all questions.

Q. 1 a. A pencil kept in a glass of water appears bent at the surface. (2)

- i. Name the phenomenon ii. Define it

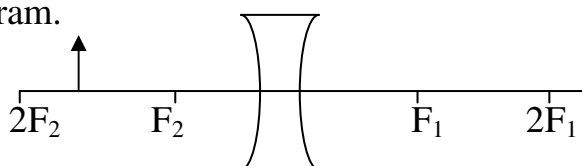
b. i. Name the eye defect ii. How is it corrected (2)

c. i. State Charles law ii. Express its mathematical form (2)

d. i. Define dispersion ii. State the main characteristic of colour (2)

e. i. How can surface tension be reduced ii. State its application (2)

Q. 2 a. The following diagram shows a ray of light incident on a concave lens. Complete the diagram. (2)

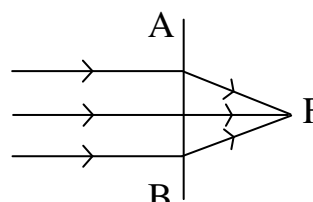


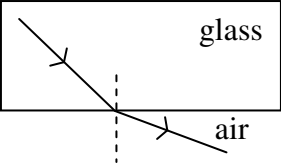
b. i. Define meniscus (2)
ii. What is the shape of the meniscus when water is put in a glass tube?

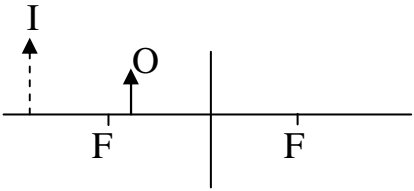
c. i. A ray of light incident normally on the surface of the glass slab. Write the value of angle of incidence. (2)
ii. State the value of refractive index.

d. State the characteristic of Brownian motion. (2)

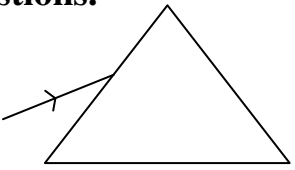
e. i. Identify the lens (AB) (2)
ii. Say whether F is real or virtual



- Q. 3** a. Define i. Normal ii. Angle of incidence (2)
- b. Look at the diagram and the complete the sentence. (2)
 When a ray of light travels from _____ medium to a _____ medium it bends _____
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- c. Many small insects are able to work on the surface of water. Explain. (2)
- d. Mercury has a convex meniscus. Why? (2)
- e. i. What is the value of velocity of light in air? (2)
 ii. The ratio of the velocity of light in air to the velocity of light in that medium is called _____

- Q. 4** a. With the help of a ray diagram show the image formation, when object is placed between O and F of a convex lens. (2)
- b. Why does Brownian motion not occur in solids? (2)
- c. An object 'O' form an image 'I' (2)
 i. Name the lens used
 ii. State its application
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- d. i. Another name for long sightedness. (2)
 ii. Which light deviates the most when white light passes through a prism?
- e. State the factors affecting speed of light in an optical medium. (2)

SECTION B [40 MARKS]
Attempt any four questions.

- Q. 5** a. i. Complete the path of the ray as it emerges out. (3)
 ii. Label its different parts
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- b. i. Differentiate between Monochromatic and Polychromatic light. (3)
 ii. Define image iii. State the importance of iris
- c. Name the factors affecting angle of deviation in a prism. (4)
- Q. 6** a. Differentiate between evaporation and boiling. (4)
- b. i. State the different kinds of image. (3)
 ii. State the importance of the eye fluids. iii. Define presbyopia.

- c. "P \propto T" i. Which law is applicable for the above form? (3)
 ii. State the law. iii. If p doubles, state the value of T

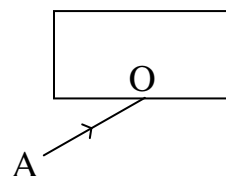
Q. 7 a. An object is placed in front of a convex lens at a distance beyond 2F. (4)
 Draw a ray diagram to show the formation of the image.
 State the nature of the image.

- b. Name the forces that account for the following. (3)
 i. Hardness of a diamond ii. Friction iii. Surface tension

- c. The minimum possible temperature is -273.16°C . Explain why. (3)
 What is this temperature called.

Q. 8 a. i. In which direction does the ray bend in a prism. (3)
 ii. State a characteristic of an image in a convex lens when object is at F.
 iii. Application of a concave lens when object is at infinity.

- b. i. Complete the path of ray of light AO as it emerges out of the glass slab. (3)
 ii. State the relation between the incident ray and emergent ray.
 iii. Mark the angle of refraction.



- c. Name the two spots found on the retina. Function of the two spots identified. (4)

Q. 9 a. i. Importance of kinetic molecular theory. (2)
 ii. What wets glass. Explain. (1)

- b. i. Define surface tension. (3)
 ii. How do soap bubbles assume a particular shape.

- c. i. What is capill (3)
 ii. Label 1, 2
 iii. Give the functions of 3, 4