



PHYSICS

BOOKS - S CHAND PHYSICS (HINGLISH)

TEST PAPER 4

Section A

1. Refractive index of media A, B, C and D are:

A	1.33
B	1.52
C	1.44
D	1.65

In which of the four media is the speed of light

(i) maximum (ii) minimum



Watch Video Solution

2. Draw ray diagrams to illustrate the formation of a virtual image by using (i) a convex lens, and (ii) a concave lens.

(b) What is the difference between the two images formed above?



Watch Video Solution

3. (a) What is an electromagnet? Draw a labelled diagram to show the making of a simple electromagnet.

(b) State three factors on which the strength of an electromagnet depends. How does the strength of electromagnet depend on these factors?



Watch Video Solution

4. (a) What is a nuclear reactor? What is the fuel used in a nuclear reactor?

(b) What type of nuclear reaction is carried out in a nuclear reactor?

(c) How is the working nuclear reactor of a

power plant shut down in an emergency?

(d) Name five places in India where nuclear power plants are located.



Watch Video Solution

5. (a) Explain why, a solar cooker box is (i) painted black from inside, and (ii) covered with a glass sheet.

(b) Give two reasons why biogas is a good domestic fuel.



Watch Video Solution

6. Write the help of a labelled circuit diagram, describe an activity to illustrate the patterns of the magnetic field lines around a straight current carrying long conducting wire.

(i) Name the rule that is used to find the direction of magnetic field associated with a current carrying conductor.

(ii) Is there a similar magnetic field produced around a thin beam of moving: (a) alpha particles (b) neutrons? Justify your answer.



Watch Video Solution

7. (a) "Improvements in our lifestyle have resulted in greater amounts of waste generation". Give two examples to support the given statement. Suggest one change that we can incorporate in our lifestyle in order to reduce non-biodegradable waste.

(b) The following organisms form a food chain. Write the food chain.

Insect, Hawk, Grass, Snake, Frog

Which of these will have highest concentration of non-biodegradable

chemicals?

Name the phenomenon.



Watch Video Solution

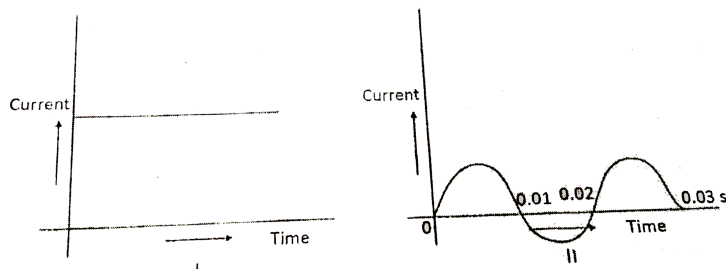
8. Analyse the following current-time graphs from two different sources:

(a) Identify the type of current in two cases

(b) What is the frequency of current in case II in India?

Use above graph to write one difference

between the current in two cases.



Watch Video Solution

9. A student is performing an experiment to study the formation of image of a highest candle by a converging lens. The converging lens has a focal length of 25 cm and the candle is placed at a distance of 15 cm from the lens.

(a) State three characteristics of the image of

the candle so formed which will be observed by the student.

(b) Name a simple device which works under these conditions.



Watch Video Solution

10. A person needs a lens of power, -5.5 D for correcting his distant vision. For correcting his near vision, he needs a lens of power, $+1.5\text{ D}$. What is the focal length of the lens required for correcting :

(a) distant vision ?

(b) near vision ?

What type of lens is being used for correcting

(i) distant vision, and (ii) near vision ?



Watch Video Solution