

SATISH CHANDRA MEMORIAL SCHOOL

HOTS

CLASS – X

Subject – Science

Time -

FM - 16

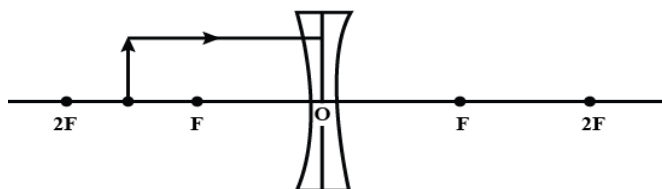
1) The refractive index of water is 1.33 and kerosene is 1.44. Calculate refractive index of the kerosene with respect to water. (1)

2) David is observing his image in a plane mirror. The distance between the mirror and his image is 4m . If he moves 1m towards the mirror ,then what is the distance between David and his image. (1)

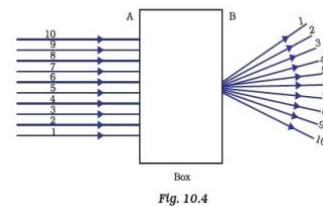
3) The figure given alongside shows the image of a clock as seen in a plane mirror. What is the correct time . (1)



4) Complete the path of the Ray. (1)



5) A beam of light is incident through the holes on side A and emerges out of the holes on the other face of the box as shown in the figure. Which of the following could be inside the box? (1)



- 6) An eye has a far point of 2m . Calculate the power of lens required. What type of lens would be needed to increase the far point to infinity. (1+1)
- 7) What is The resistance of a wire of length 300m and cross-section area 1.0 mm^2 made of material of resistivity $1.0 \times 10^{-7} \Omega \text{m}$. (2)
- 8) What is the Difference Between Ammeter and Galvanometer, Applications. (1)
- 9) A metal A, which is used in thermite process when heated with oxygen gives an oxide B, which is amphoteric in nature. Write the reaction of oxide B with NaOH. (1)
- 10) A substance X is used as a building material and insoluble in water. When reacts with dil. HCl it produces a gas which turns lime water milky. Predict the substance and write the chemical reaction involved. (1)
- 11) What happens when Zinc metal is added to copper sulphate solution? Give the balanced chemical equation. (1)
- 12) Write the anaerobic respiration reaction that takes place in muscle cells. (1)
- 13) How does Plasmodium reproduce? Is this method sexual or asexual (1)
- 14) Along the path of the vas-deferens the secretions of which gland provide nutrition to the sperms? (1)