Cosmo School

Subject Code		
1	3	6

Home Assignment - 2020

Class: X

Subject: Physics

Time: 1 Hour 30 Min.

Part I: Creative Questions

[Read the stem carefully and answer the questions.]

1. An object is put 20 cm away on principal axis of a lens of +2.5D power.

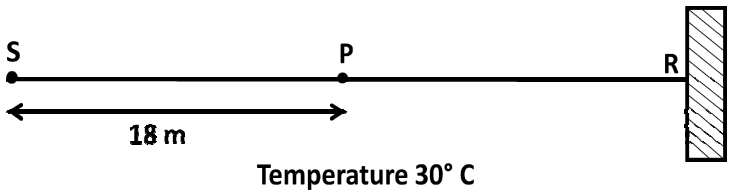
a) What is lens?

b) Explain the advantages of having two eyes.

c) Find the distance of that object's image from that lens.

d) What type of eyesight problem is remedied with this lens? Explain with drawing ray diagrams.

2.



a) What is called echo?

b) Why do bats feel more comfortable at night? Explain.

c) Find the distance between S and R.

d) Is it possible to hear the echo at position P? Explain mathematically.

3. The length of a rod is 100 m at 36.89°C. Its length becomes 100.033 m at 66.89°C.

a) Define evaporation.

b) Why thermal expansion occurs due to increase of temperature?

c) Determine the Fahrenheit value of final temperature in the stem.

d) The rod in the stem is made of which metal? Give your opinion with mathematical explanation.

Part II: Short Questions

i. What is the dimension of pressure?

ii. What is the normal temperature of body in Kelvin scale?

iii. What is the SI unit of temperature?

iv. What is the refractive index of the element of optical fibre?

v. What is the unit of electric field intensity?

vi. If a body of charge 5C is placed at a point in an electric field then it gains a force of 200 N. Which one is the magnitude of electric intensity??

vii. When a glass rod is rubbed with silk, what charge is induced by the glass rod?

viii. Who first introduced electric lines of force?

ix. What is the density of gold??

x. Which apparatus is used to measure the density of air?

xi. What is called the ionized gas at very high temperature?

xii. At which temperature the reading in Celsius and Kelvin scale are equal?

xiii. What is the coefficient of volume expansion of copper?

xiv. What is meant by expansion of liquid?

xv. For 1°C variation in temperature what will be the variation in Kelvin scale?

xvi. What kind of medium is needed for the transmission of sound?

xvii. For any critical angle, what is the amount of angle of refraction?

xviii. Where will be the position of the image if the object is places at the focal length in a convex lens?

xix. What will happen if the two gold leaves are charged negatively?

xx. What type of quantity is electric potential?