Refraction of light class 10 questions

Question 1 State Snell's law in detail and give its uses.

Question 2 Can you apply the laws for plane refracting surfaces to spherical refracting surfaces? State the laws of refraction of light.

Question 3 What does the positive sign associated with the virtual image and the negative sign associated with the real image signify?

Question 4 What are the two factors on which the lateral displacement of an emergent ray from glass slab depends?

Question 5 "refractive index of a glass is 1.5". What does it meant by this statement?

Question 6 When two or more lenses are placed in contact what will be their combined power?

Question 7 A ray of light is incident on one face of a rectangular glass slab emerges from the opposite face of the slab parallel to the direction of the incident ray. Why does it happen so?

Question 8 Why does a ray of light bends from its path when it travels from one medium to another?

Question 9 Write the relationship between the SI unit of power of the lens and the SI unit of focal length.

Question 11 A ray of light travelling from a medium X enters obliquely into another medium Y. If it bends away from the normal then state which one of the two is relatively optically denser? Why?

Question 12 A ray of light traveling in air enters water normally. What are the values of angle of incidence and angle of refraction?

Question 13 Why is the refractive index of atmosphere different at different altitudes?

Question 14 What happens to a ray of light when it travels from one medium to another and both the mediums have equal refractive indices? State the cause of refraction of light?

Question 15 For the same angle of incidence in media P, Q and R the angles of refraction are 45°, 35^{0} and 15° respectively. In which medium will the velocity of light be minimum? Give reason for your answer.

Question 16 Which of the two lenses has the greater power:

(a) A convex lens of focal length 5 cm?

(b) A convex lens of focal length 50 cm? Justify your answer.