

D.A.V MUKHYAMANTRI PUBLIC SCHOOL PATRATU

Summer Vacation Homework (2020 - 21)

Class: X

Subject: Physics

Q1. The magnification produced by a mirror is -1.5. What does it signify about the image formed?

Q2. How can you identify three types of mirrors without touching?

Q3. A spherical mirror produces an image of magnification-1.0 on a screen placed at a distance of 30 cm from the pole of the mirror

- (i) write the type of mirror in this case.
- (ii) what is the focal length of the mirror?
- (iii) what is the nature of the image formed?
- (iv) draw the ray diagram to show the image formation in this case.

Q4. A person is able to see objects clearly only when these are lying at distance between 50cm and 300cm from his eye.

- (i) What kind of defect of vision he is suffering from?
- (ii) What kind of lenses will he require to increase his range of vision from 25 cm to infinity? Explain briefly.
- (iii) draw relevant ray diagrams.

Q5. Why do stars twinkle? Explain with a suitable diagram?

Q6. Briefly Explain Blue colour of sky and reddish colour of sun at sunrise and sunset?

MCQ

1. A 10 mm long awl pin is placed vertically in front of a concave Mirror. A 5 mm long image of the awl pin is formed at 30 cm in front of the mirror. The focal length of this mirror is:
(a) – 30 cm (b) – 20 cm (c) – 40 cm (d) – 60 2.
2. Which of the following statements is true?
(a) A convex lens has 4 dioptr power having a focal length 0.25 m.
(b) A convex lens has –4 dioptr power having a focal length 0.25 m.
(c) A concave lens has 4 dioptr power having a focal length 0.25 m.
(d) A concave lens has –4 dioptr power having a focal length 0.25 m.
3. You are given water, mustard oil, glycerine and kerosene. In which of these media a ray of light incident obliquely at same angle would bend the most?
(a) Kerosene (b) Water (c) Mustard oil (d) Glycerine
4. A child is standing in front of a magic mirror. She finds the image of her head bigger, the middle portion of her body of the same size and that of the legs smaller. The following is the order of combinations for the magic mirror from the top.
(a) Plane, convex and concave (b) Convex, concave and plane
(c) Concave, plane and convex (d) Convex, plane and concave
5. A student sitting on the last bench can read the letters written on the blackboard but is not able to read the letters written in his text book. Which of the following statements is correct?
(a) The near point of his eyes has receded away.
(b) The near point of his eyes has come closer to him.
(c) The far point of his eyes has come closer to him.
(d) The far point of his eyes has receded away.

1. Write the chemical formula of the following compounds

(i) lime (ii) nitric acid (iii) plaster of paris (iv) sodium acetate (v) backing soda (vi) washing soda
(vii) bleaching powder (viii) king of chemical (ix) lime stone (x) common salt

2. Write the formula of acid and base used to form given salts-

(i) potassium sulphate (ii) zinc chloride (iii) ammonium chloride (iv) barium dsulphate.

3. write the name of acid present in the following-

(i) apple (ii) curd (iii) vinegar (iv) lemon (v) orange (vi) bee sting (vii) tamarind.

4. Write the name some (at least 10)chemical compounds that you use in your day to day life. Classify them as acid bases and

5. Write 20 reactions(any types) and 30 compounds name in a stick file.

1. Name the enzyme present in saliva.

2. What is emulsification?

3. Why do herbivorous have longer, small intestine than carnivores?

4. Explain the process of digestion in mouth, stomach and small intestine in human body.

5. Draw a diagram to show nutrition in amoeba and label the the parts used for this purpose served by this parts other
Than nutrition.

6. Prepare a model of following (any one)

i. Digestive system

ii. Respiratory system

iii. Circulatory system

**** Online MCQ Test during the Vacation****