

**Class 8**

**Time : 3 hrs.**

**PHYSICS (Time : 1 hr.; Max. Marks : 30)**

Multiple choice questions:

(1x6=6)

1. Which of the following controls the amount of light entering the eye?  
a) Pupil                      b) Iris                      c) Cornea                      d) Ciliary muscles
2. Which of the following colours bends the most when light passes through a prism?  
a) Red                      b) Blue                      c) Yellow                      d) Violet
3. In a Kaleidoscope, the mirrors make an angle of \_\_\_\_\_ with each other.  
a)  $60^\circ$                       b)  $45^\circ$                       c)  $90^\circ$                       d)  $30^\circ$
4. Ball bearings are useful because  
a) rolling friction > sliding friction                      b) rolling friction < sliding friction  
c) rolling friction = sliding friction                      d) they require less maintenance
5. Which of these cannot be changed by force acting on a body?  
a) Direction of motion                      b) State of rest  
c) Shape                      d) Mass
6. Which of these is used to measure the pressure exerted by liquid?  
a) Barometer                      b) Manometer  
c) Pressure Gauge                      d) Both (b) and (c)
7. What causes refraction of light when it passes from one medium to the other? (1)
8. Calculate the number of images formed if two mirrors are placed at an angle of  $20^\circ$  with respect to each other. (2)
9. Write two differences between myopia and hypermetropia. (Diagram NOT required). (2)
10. a) Give two advantages of friction in daily life. Also give two methods of increasing friction.  
b) What causes friction? (2+1)
11. State the laws of reflection. List two characteristics of an image formed by a plane mirror. (2+1)
12. Draw a neat and well labeled diagram to show the refraction by a glass slab. What is meant by lateral displacement? (2+1)
13. a) Differentiate between contact and non-contact force. Give two examples of each.

- b) What will be the amount of pressure exerted by a brick which applies a force of 2.5N, when (i) it is placed upright on the soil and (ii) it is placed on its widest base? The dimensions of the brick are 25cm x 10cm x 5cm. (2+3)
14. a) Draw a complete ray diagram to show the position of the image formed by a convex lens when the object placed between O and F. List the characteristics of image so formed.
- b) Define optical centre. (3+1+1)

### CHEMISTRY (Time : 1 hr.; Max. Marks : 30)

Multiple Choice Questions: (1x6=6)

- Metals react with oxygen to form metal
  - Acidic Oxide
  - either acidic or basic oxide depending on the metal
  - basic oxide
  - no reaction.
- Which of these is a fibre derived from chemicals?
  - Rayon
  - Cotton
  - Nylon
  - Silk
- Pieces of copper, silver and gold are dropped into a solution of ferrous sulphate. The piece that will get a coating of copper is
  - Iron
  - Silver
  - Gold
  - none of them.
- Which gas is evolved when metals react with acids?
  - Hydrogen
  - Oxygen
  - Carbon dioxide
  - Water.
- The metal most used in the construction industry is
  - iron
  - copper
  - aluminium
  - tin
- Which of these plastics can be used to insulate the hollow walls of refrigerators?
  - Perspex
  - Teflon
  - Polystyrene
  - Polyethene.
- What is plastic? What is a common property of all plastics?  
(1)
- Name the following:-  
( $\frac{1}{2} \times 4 = 2$ )
  - The main source of plastic.
  - Synthetic fibre used for making socks and stockings.
  - Plastic used as a covering for electric wires.
  - Plastic used for making table tops.
- Define the terms:
  - Non-metals
  - Ductility
 (2)
- Complete and balance the following equations:  
(1x3=3)
  - $\text{Na} + \text{H}_2\text{O} \rightarrow$



3. Which of these do not have a regular cell structure?  
 a) Bacteria      b) Viruses      c) Algae      d) Protozoa
4. Microorganisms spread through  
 a) Air      b) Cuts      c) Water      d) All of these
5. Which of these does not prevent growth of bacteria?  
 a) Salt      b) Sugar      c) Water      d) Oil
6. Amoeba is a  
 a) Bacterium      b) Virus      c) Fungus      d) Protozoa
7. Name the following. (1/2x4=2)  
 a) Control center of the cell \_\_\_\_\_.  
 b) Spherical shaped bacteria \_\_\_\_\_.  
 c) Power house of the cell \_\_\_\_\_.  
 d) Sac like organelle in the plant cell which store food, water or waste \_\_\_\_\_.
8. a) What causes food poisoning?  
 b) Why do you think curd turns sour faster in summer than in winter? (2)
9. Which microorganisms act as decomposers? How is this activity useful to us? (2)
10. How do viruses cause disease? (2)
11. State the function of (1/2x4=2)  
 a) Cilia      b) Chloroplast      c) Ribosomes      d) Centrosomes
12. What are the main points of cell theory? (any 4) (2)
13. Give 4 ways to conserve water. (2)
14. Draw a neat & labelled diagram of animal cell & state any 3 differences between plant cell & animal cell. (5)
15. i) Discuss the different methods available to us for making water potable by killing germs.  
 ii) What are water pollutants? (5)

-X-X-X-X-X-X-