

**SYLLABUS : MICRO – ORGANISMS, METALS AND NON – METALS, FRICTION, SYNTHETIC FIBERS AND PLASTICS, COAL AND PETROLEUM, COMBUSTION AND FLAME, CHEMICAL EFFECTS OF ELECTIC CURRENT, LIGHT.**

**GENERAL INSTRUCTIONS : Draw Diagrams with Pencils.**

- All questions are compulsory. **Maximum Marks are 60.**
- The question paper consists of 25 Questions.
- **Section – A** : Question 1 to 10 are 1mark each.
- **Section – B** : Question 11 to 20 are 3 marks each.
- **Section – C** : Question 21 to 24 are 5 marks each.

**SECTION A : (1 × 10 = 10)**

1. Smut of rice is caused by  
(a) Virus                      (b) protozoa                      (c) fungi                      (d) bacteria
2. Which material is best suited for covering electric wires?  
(a) Polythene                      (b) PVC                      (c) Polystyrene                      (d) Nylon
3. In extraction of copper, the flux used is  
(a) FeO                      (b) SiO<sub>2</sub>                      (c) CaO                      (d) FeSiO<sub>3</sub>
4. The fossil fuel found below the sea is  
(a) Petrol                      (b) petroleum                      (c) kerosene                      (d) diesel
5. The fuel used in the human body to produce energy, is  
(a) Coal                      (b) food                      (c) juices                      (d) paper
6. Nails have pointed ends. This results in  
(a) A decrease in the force exerted on them.  
(b) A decrease in the effect of the force exerted on them.  
(c) An increase in the force exerted on them.  
(d) An increase in the effect of the force exerted on them.
7. Once a body starts moving on table, the friction which comes into play is  
(a) Static fraction                      (b) limiting friction                      (c) rolling friction                      (d) none of these
8. Distilled water is a  
(a) Conductor                      (b) insulator                      (c) semi – conductor                      (d) semi – insulator
9. The phenomenon of dispersion is not visible in a  
(a) prism                      (b) glass slab                      (c) mirror                      (d) none of these
10. Eye problems happen due to lack of  
(a) Vitamin C                      (b) Vitamin D                      (c) Vitamin A                      (d) Vitamin B complex

**SECTION B : (3 × 10 = 30)**

11. How are bacterial beneficial for us?
12. Rana wants to buy shirts for summer. Should he buy cotton shirts made from synthetic material? Advice Rana, giving your reason.
13. Give an activity to show that metals burn in air to form oxides.
14. How does the foam type fire extinguisher work?
15. Define pressure. Write the relation between pressure force and area. Name the instrument used to measure atmospheric pressure.
16. Give examples to show that friction is both a friend and a foe.
17. Explain electrolysis of water by an activity.
18. Fill in the blanks with appropriate words:
  - (a) During electrolysis of water, \_\_\_\_\_ is formed at the cathode.
  - (b) The process of obtaining pure metal from the impure ore, is called \_\_\_\_\_.
  - (c) When the relative motion between a magnet and coil is stopped, the flow of current \_\_\_\_\_.
19. What is cataract of the eye?
20. What will be the angle between two mirrors if the number of images formed is 8?

**SECTION C : (5 × 4 = 20)**

21. (a) A copper spoon had fallen into a container containing dil. HCl. What would happen to it in three days' time?
  - (b) Give reasons for the following:
    - (i) Metals are used for making bells.
    - (ii) We can't use pure gold to make jewellery.
22. (i) Water is not used to control fires involving electrical equipment.
  - (ii) In an experiment 4.5 kg of a fuel was completely burnt. The heat produced was measured to be 180,000 kJ. Calculate the calorific value of the fuel.
23. What is the difference between current flowing through metals and current flowing through liquids?
24. How can you compare human eye with photographic camera?