



x) A student prepared a temporary mount of onion peel but he could not observe the cells under the microscope. Which could be the possible reason ?

- a) he might have forgotten to stain the cell
- b) he might have over stained the cell
- c) There may be air bubbles in the prepared slide
- d) All of these

2. Fill in the blanks : (5x1=5)

- (i) Sodium benzoate is a common food .....
- (ii) The stage of the embryo in which all the body parts can be identified is called .....
- (iii) Forest fire is an example of .....combustion.
- (iv) Sulphur dioxide when dissolved in water turns .....litmus .....
- (v) PVC stands for .....

3. Answer in one word or a sentence : (5x1=5)

- (i) Expand IVF.
- (ii) Name a communicable disease transmitted through air.
- (iii) What is rolling friction?
- (iv) Why petroleum is called ' black gold' ?
- (v) Which force is responsible for the motion of planets around the sun ?

**Ans: Gravitational force.**

#### SECTION-B

4. If 300 ml water is added with 3 tea spoon full of sugar and half a spoon of yeast powder and left covered in a warm place for a few hours, what changes occur in the solution and why? (3)

**Answer: Yeast in the sugar solution will multiply fast, as a result of which the process of fermentation will take place. The sugar solution will transform to alcohol. Huge amount of bubbles will be observed on the surface of water. Also the solution will emit a characteristic odour.**

5. Give reasons: (3)

- i) Fresh milk is boiled before consumption while processed milk stored in packets can be consumed without boiling.
- ii) Raw vegetables and fruits are kept in refrigerators whereas jams and pickles can be kept outside.

6. Draw a labelled diagram of onion peel. Write the function of the chloroplast present in plant cell. (3)

**OR**

Draw a labelled diagram of a prokaryotic and a eukaryotic cell.

7. You are shown two slides – one of a plant cell and another of an animal cell and asked to distinguish between the two. Write atleast three clues that you will look for. (3)

8. Why rayon is called artificial silk ? List some of its uses. (1+2)

**Ans: Rayon is called artificial silk because it is prepared artificially and it resembles silk in its appearance, lustre and texture .**

**Its uses are as follows :-**

**(i) It is used in textile industry for making clothing like sarees, blouses dresses and socks.**

**(ii) It is used in furnishing such as bedsheets , curtains blankets etc.**

9. Metal oxides are basic in nature whereas oxides of non metals are acidic in nature. Justify. (3)

10. What are fluids ? Give examples. How pressure is exerted by liquids? (3)

OR

Describe an activity to show that liquids exert pressure in all directions.

10. Explain some cases where we need to increase friction (3)

11. What are LPG and CNG ? List the uses of CNG. (3)

12. Describe an activity to explain why paper by itself catches fire easily while water in a paper cup can be boiled .

OR (3)

**(i) Can the process of rusting be called combustion ? Discuss.**

**(ii) Explain how the uses of CNG in automobiles has reduced pollution in our cities.**

### SECTION – C

13. How will you prepare a temporary stained mount of onion peel? (5)

**Answer: First of all a piece of onion is taken and a thin, transparent peel from its inner side with the help of forceps is pulled and kept in a watch glass containing water. A small portion of the peel is cut and taken out and placed on a clean glass slide. Few drops of safranin in the peel kept on the slide are added with the help of dropper so as to stain the peel. The excess water and the stain from the slide, surrounding the peel are removed with the help of a blotting paper. One or two drops of glycerine is added on the slide and a coverslip is placed over the peel with the help of mounting**

**needle. While placing the cover slip over peel, care should be taken that no air bubbles should enter the coverslip. Now carefully the temporary mount of onion peel can be observed under the microscope.**

14. Draw a labelled diagram of reproductive system of human male. Why the male gamete is smaller in size and also has a tail. (5)

**OR**

Draw a diagram showing metamorphosis in frog.

15. Explain the advantages and disadvantages of friction. (5)  
16. Compare the physical and chemical properties (three each ) of metals and non metals.

**OR** (5)

- (i) What are displacement reactions ? Explain with an example.  
(ii) Explain why sodium is stored in kerosene whereas phosphorus is kept in water.
17. Explain contact and non contact forces with examples. (5)  
18. (i) What is a fire extinguisher? What are the principles of its working?  
(ii) Explain its working.

**OR** (5)

List the harmful effects of burning fuels on our environment.

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