PRACTICE PAPER-5

CLASS X

Science (086)

Term 2 (2021-22)

Max. Marks:40 **Time allowed: 2 hours**

General Instructions:

i) All questions are compulsory.

ii) The question paper has **three sections and 15 questions. All questions are compulsory.**

iii) Section–A has 7 questions of 2 marks each; Section–B has 6 questions of 3 marks each; and Section–C has 2 case based questions of 4 marks each.

iv) Internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.

SECTION-A

1. Why does bread mould grow profusely on a moist slice of bread rather than on a dry slice of bread?
2. In the given Figure label the parts and mention their functions
   (a) Production of egg
   (b) Site of fertilisation
   (c) Site of implantation
   (d) Entry of the sperms

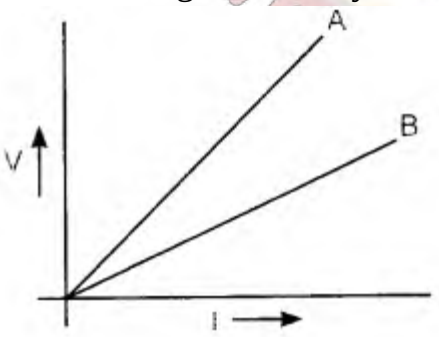
3. Differentiate between inherited and acquired characters. Give one example for each type.
4. What will happen if we kill all the organisms in one trophic level?
5. Explain any two situations that can cause electrical hazards in domestic circuits.

6. a) What would be the electron dot structure of a molecule of sulphur which is made up of eight atoms of sulphur.
   b) What is meant by a functional group in an organic compound? Name the functional group present in
   (i) CH_3CH_2OH
   (ii) CH_3COOH

7. Give reasons for the following:
   (i)Element carbon forms compounds mainly by covalent bonding.
   (ii)Diamond has a high melting point.

SECTION-B

8. A woman with blonde curly hair married a man with black soft hair. All of their children in the first generation had black soft hair but in the next generation, children had different combinations in the ratio of 9:3:3:1. State the law that governs this Expression.
9. Why is damage to the ozone layer a cause for concern? What steps are being taken to limit this damage?
10. V-I graph for two wires A and B are shown in the figure. If both wires are of same length and same thickness, which of the two is made of a material of high resistivity? Give justification for your answer.



11. State the consequences that can lead to a short circuit.

Or

One of the major cause of fire in office building is short circuiting. List three factors which may lead to the short circuit.

12. Choose from the following:
    $6^{C,}$ $8^{O,}$ $10^{Ne,}$ $11^{Na,}$$14^{Si}$
    (a) Elements that should be in the same period.
    (b) Elements that should be in the same group.
    State reason for your selection in each case.

13. a) An element 'X' belongs to 3rd period and group 17 of the periodic table. State its (i) electronic configuration, (ii) valency. Justify your answer with reasoning.

b) Na, Mg and Al are the elements having one, two and three valence electrons respectively. Which of these elements (a) has the largest atomic radius, (b) is least reactive? Justify your answer stating reason for each.

SECTION-C

14. Study the given data and answer the questions following the data:
Parental plants cross-fertilize and seeds collected F1 First Generation offsprings F2 of offsprings of self-pollination of F1 Male parents always bare red flowers, Female parent always had white flowers, 330 seeds sown and observed, all 330 gave red flowers, out of 44 seeds 33 seeds gave plants with red flowers and 11 seeds gave plants with white flowers.

(i) What is the term for this type of cross?

(ii) What does the data of the column marked F indicate?

(iii) Express the gene type of the (a) parents (b) F1progeny and (c) F2 progeny.

15. What is meant by electric current? Name and define its SI unit. In a conductor electrons are flowing from B to A. What is the direction of conventional current? Give justification for your answer.

A steady current of 1 ampere flows through a conductor. Calculate the number of electrons that flows through any section of the conductor in 1 second. (Charge on electron 1.6 X 10-19 coulomb).