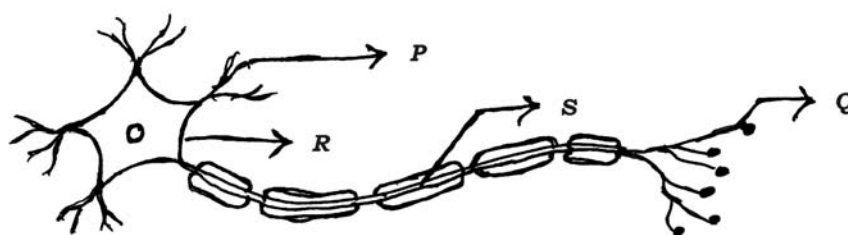




Four alternatives are given for each of the following questions / incomplete statements. Only one of them is correct or most appropriate. Choose the correct alternative and write the complete answer along with its letter of alphabet.

10 × 1 = 10

- The change that occurs in the eye to see the distant objects clearly is
 - focal length of the eye lens decreases
 - curvature of the eye lens increases
 - focal length of the eye lens increases
 - ciliary muscles of the eye contract
- The functional groups present in propanol and propanal respectively are
 - OH and — CHO
 - OH and — COOH
 - CHO and — COOH
 - CHO and — CO
- The correct path of the movement of nerve impulses in the following diagram is



- $Q \rightarrow S \rightarrow R \rightarrow P$
- $P \rightarrow Q \rightarrow R \rightarrow S$
- $S \rightarrow R \rightarrow Q \rightarrow P$
- $P \rightarrow R \rightarrow S \rightarrow Q$

4. The resistance of a conductor is 27Ω . If it is cut into three equal parts and connected in parallel, then its total resistance is
- (A) 6Ω (B) 3Ω
(C) 9Ω (D) 27Ω
5. The chemical equation that represents neutralization reaction among the following is
- (A) $\text{BaCl}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{BaSO}_4 + 2\text{HCl}$
(B) $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$
(C) $2\text{NaOH} + \text{H}_2\text{SO}_4 \rightarrow \text{Na}_2\text{SO}_4 + 2\text{H}_2\text{O}$
(D) $\text{AgNO}_3 + \text{HCl} \rightarrow \text{AgCl} + \text{HNO}_3$
6. By constructing Khadin check-dams in level terrains,
- (A) underground water level decreases
(B) underground water level increases
(C) vegetation in the nearby areas are destroyed due to excess moisture
(D) underground water gets polluted
7. To obtain a diminished image of an object from a concave mirror, position of the object should be
- (F = principal focus, C = centre of curvature, P = pole)
- (A) between C and F (B) beyond C
(C) between P and F (D) at F

8. The electronic configuration of element X is 2, 8, 8, 1 and the electronic configuration of element Y is 2, 8, 7. Then the type of bond formed between these two elements is
- (A) covalent bond
 - (B) hydrogen bond
 - (C) metallic bond
 - (D) ionic bond
9. Part of the flower that develops into fruit and part of the seed that develops into root respectively are
- (A) ovary and plumule
 - (B) plumule and radicle
 - (C) ovary and radicle
 - (D) ovary and ovule
10. A pure dominant pea plant producing round — yellow seeds is crossed with pure recessive pea plant producing wrinkled — green seeds. The number of plants bearing round — green seeds in the F_1 generation of Mendel's experiment is
- (A) 0
 - (B) 1
 - (C) 3
 - (D) 9

11. The functions of hormones are given in **Column-A** and the names of the hormones are given in **Column-B**. Match them and write the answer along with its letters :

 $4 \times 1 = 4$ **Column - A****Column - B**

- | | |
|--|--------------------|
| (A) Prepares the body to deal with the situation | (i) Growth hormone |
| (B) Regulates metabolism for body growth | (ii) Testosterone |
| (C) Regulates blood sugar levels | (iii) Adrenaline |
| (D) Regulates the growth and development of the body | (iv) Progesterone |
| | (v) Insulin |
| | (vi) Thyroxine |
| | (vii) Oestrogen |

Answer the following questions. $7 \times 1 = 7$

12. Name the acid present in the stinging hair of nettle leaves.
13. What are fossils ?
14. Convex mirror is commonly used as rear-view mirror in vehicles. Why ?
15. What is roasting in metallurgy ?



Four alternatives are given for each of the following questions / incomplete statements. Only one of them is correct or most appropriate. Choose the correct alternative and write the complete answer along with its letter of alphabet.

$$10 \times 1 = 10$$

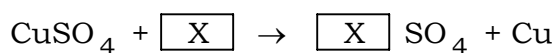
1. The principle of working of solar cells is
 - (A) magnetic effect
 - (B) electromagnetic induction
 - (C) chemical effect
 - (D) photovoltaic effect

2. The hormone which inhibits the growth of the plants is
 - (A) auxin
 - (B) abscisic acid
 - (C) gibberellin
 - (D) cytokinin

3. The metal compound used in the manufacture of yellow coloured glass is
 - (A) cobalt compound
 - (B) ferric compound
 - (C) chromium compound
 - (D) nickel compound

4. The device used to increase or decrease the input A.C. voltage is
- (A) motor (B) induction coil
(C) transformer (D) commutator
5. A tall pea plant is crossed with a dwarf pea plant. If 24 pea plants are obtained in F_2 generation then the correct number of tall and dwarf pea plants are
- (A) 18 tall and 6 dwarf
(B) 12 tall and 12 dwarf
(C) 6 tall and 18 dwarf
(D) 16 tall and 8 dwarf
6. The frequency of the current produced in A.C. dynamo depends on the
- (A) rate of rotation of the armature
(B) strength of the magnetic field
(C) number of turns of the coil
(D) size of the dynamo
7. The general molecular formula of alkynes is
- (A) $C_n H_{2n-2}$ (B) $C_n H_{2n+2}$
(C) $C_n H_{2n}$ (D) $C_n H_{2n+1}$
8. One of the factors responsible for the depletion of ozone layer is
- (A) reforestation (B) use of biofuel
(C) use of detergents (D) use of aerosols

9. In the following chemical reaction metal represented by 'X' is



- (A) Ag (B) Au
(C) Fe (D) Hg

10. The aqueous solution that conducts electricity among the following is

- (A) sugar solution
(B) fructose solution
(C) glucose solution
(D) sodium chloride solution

11. The types of animal tissue are given in **Column-A** and their functions are given in **Column-B**. Match them and write the answer along with its letter :

4 × 1 = 4

Column - A

Column - B

- | | |
|-----------------|---|
| (A) Lymph | (i) attaches muscles to the bones |
| (B) Bone marrow | (ii) responds to the stimulus |
| (C) Tendon | (iii) produces antibodies |
| (D) Cartilage | (iv) connects one bone to another |
| | (v) brings bending and stretching movements of the body |
| | (vi) facilitates transport of substances in the body |
| | (vii) produces blood cells |

Answer the following questions.

7 × 1 = 7

12. Wind mills cannot be installed in all the regions. Why ?
13. Doppler effect of sound is not experienced by the listener when the listener and the source of sound move with the same speed and in the same direction. Why ?
14. Name the male and female gametes producing structures found in gametophyte of bryophytes.
15. State modern periodic law.
16. What are the merits of glazing the earthenwares ?
17. The platelets count in the blood sample of a person is found to be $40,000/\text{mm}^3$.
Then, from which disease that person is suffering ?
18. Write the two functional groups present in salicylic acid.

