

## COMMON SECOND REVISION TEST - 2023

Standard X

Reg.No. 

--	--	--	--	--

## SCIENCE

Time : 2.30 hrs

Part - I

Marks : 75

12 x 1 = 12

## I. Choose the correct answer:

1. Newton's III law is applicable
  - a) for a body is at rest
  - b) for a body in motion
  - c) both (a) and (b)
  - d) only for bodies with equal masses
2. Temperature is the average \_\_\_\_\_ of the molecules of a substance.
  - a) difference in K.E and P.E
  - b) sum P.E and K.E
  - c) difference in T.E and P.E
  - d) difference in K.E and T.E
3. The velocity of sound in air at a particular temperature is  $330 \text{ ms}^{-1}$ . What will be its value when temperature is doubled and the pressure is halved?
  - a)  $330 \text{ ms}^{-1}$
  - b)  $330 \times \sqrt{2} \text{ ms}^{-1}$
  - c)  $165 \text{ ms}^{-1}$
  - d)  $\frac{330}{\sqrt{2}} \text{ ms}^{-1}$
4. The chief ore of iron is \_\_\_\_\_.
  - a) haematite
  - b) copper pyrites
  - c) magnetite
  - d) bauxite
5. Identify the non-aqueous solution.
  - a) sodium chloride in water
  - b) glucose in water
  - c) copper sulphate in water
  - d) sulphur in carbon-di-sulphide
6. The molecular formula of ethanol
  - a)  $\text{CH}_3\text{COOH}$
  - b)  $\text{CH}_3\text{CHO}$
  - c)  $\text{CH}_3\text{CH}_2\text{OH}$
  - d)  $\text{CH}_3-\text{O}-\text{CH}_3$
7. Casparian strips are present in the \_\_\_\_\_ of the root.
  - a) cortex
  - b) pericycle
  - c) pith
  - d) endodermis
8. A patient with blood group 'O' was injured in an accident and has blood loss. Which group of blood should be used by doctor for transfusion?
  - a) 'O' group
  - b) AB group
  - c) A or B group
  - d) all blood group
9. Node of ranvier is found in
  - a) muscles
  - b) axons
  - c) dendrites
  - d) cyton
10. Thyroid gland requires \_\_\_\_\_ of iodine everyday for the production of thyroxine.
  - a)  $110 \mu\text{g}$
  - b)  $100 \mu\text{g}$
  - c)  $120 \mu\text{g}$
  - d)  $105 \mu\text{g}$
11. The \_\_\_\_\_ units form the backbone of the DNA.
  - a) 5 carbon sugar
  - b) phosphate
  - c) nitrogenous bases
  - d) sugar phosphate
12. The term ethanobotany was coined by \_\_\_\_\_.
  - a) Khorana
  - b) J.W.Harsberger
  - c) Ronald Ross
  - d) Hugo de Vries

## Part - II

## II. Answer any 7 questions. (Q.No.22 is compulsory)

7 x 2 = 14

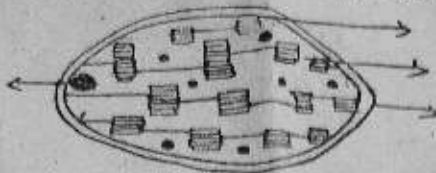
13. What is power of accommodation of eye?
14. Why is tungsten metal used in bulbs, but not in fuse wires?
15. Say true or false. If false, correct the statement.
  - a) Noble gases are diatomic
  - b) Molar mass of  $\text{CO}_2$  is 42 g
16. Classify the following substances into deliquescent hygroscopic.
 

Con.sulphuric acid, copper sulphate pentahydrate silica gel, calcium chloride and gypsum salt.

(2)

17. Draw the structure of chloroplast and mark any 4 parts.

X Science



18. a) Give the common name of the *Hirudinaria granulosa*.  
b) Why is the teeth of rabbit called heterodont?

19. State the applications of DNA fingerprinting technique.

20. Match the following :

- |               |   |                          |   |
|---------------|---|--------------------------|---|
| a) Sarcoma    | - | Stomach cancer           | 2 |
| b) Carcinoma  | - | Excessive thirst         | 3 |
| c) Polydipsia | - | Excessive hunger         | 4 |
| d) Polyphagia | - | Connective tissue cancer | 1 |

21. Fill in the blanks :

- a) Chipko movement is initiated against \_\_\_\_\_  
b) \_\_\_\_\_ is a biosphere reserve in Tamilnadu.

22. If the pH of a solution is 4.5, what is its pOH?

Part - III

III. Answer any 7 questions. (Q.No.32 is compulsory)

7 x 4 = 28

23. State Newton's Law of Motion.

24. a) Define one Roentgen

b) State Soddy and Fajan's displacement law.

25. a) Identify the bond between H and F in HF molecule.

b) What property forms the basis of identification?

c) How does the property vary in periods and in groups?

26. Explain the types of double displacement reactions with examples.

27. a) Why is the sinoatrial node called the pacemaker of heart?

b) Differentiate between systemic circulation and pulmonary circulation.

28. a) Name the gaseous plant hormone. Describe its three different actions in plants.

b) Which hormone is known as stress hormone in plants?

29. Write a neat labelled diagram. Describe the parts of a typical angiosperm ovule.

30. What is the importance of rainwater harvesting?

31. How do you differentiate homologous organs from analogous organs?

32. Two resistors when connected in parallel give the resultant resistance of 2 ohm, but when connected in series the effective resistance becomes 9 ohm. Calculate the value of each resistance.

Part - IV

IV. Answer all the questions.

3 x 7 = 21

33. a) State and prove the law of conservation of linear momentum. (OR)

b) Explain the construction and working of a 'compound microscope'.

34. a) Calculate the number of moles in

i) 27 g of Al    ii)  $1.51 \times 10^{23}$  molecules of  $\text{NH}_4\text{Cl}$  (OR)

b) i) How is ethanoic acid prepared from ethanol? Give the chemical equation.

ii) Differentiate soaps and detergents.

35. a) Illustrate the structure and functions of brain. (OR)

b) i) Changes in lifestyle is a risk factor for occurrence of cardiovascular diseases. Can it be modified? If yes, suggest measures for prevention.

ii) How does Insulin deficiency occur?

\*\*\*\*\*  
-E. Vikram (M.Sc., B.Ed (Maths))  
OIRS School, Arni (TVM Dist)  
& Sri Raja Lakshmi Tuition Centre,  
Arni (TVM Dist).