T THOOTHUKUDI

Reg. No.: | | | | | | |

COMMON FIRST REVISION EXAMINATION - 2024

Std - X

SCIENCE

Time : 3.00 Hours **Marks:75**

Answer all the questions. Choose the most appropriate answer from the given four alternatives and write the option code and corresponding answer.12 x 1 = 12

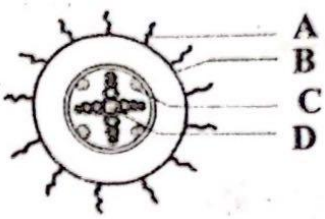
1. Impulse is equals to
   a) rate of change of momentum b) rate of force and time
   c) change of momentum d) rate of change of mass
2. The eye ball is approximately spherical in shape with a diameter of about ..... cm.
   a) 2.3 b) 2.2 c) 2.0 d) 2.5
3. Kilowatt hour is the unit of
   a) resistivity b) conductivity c) electrical energy d) electrical power
4. The volume occupied by 4.4. g of CO_2 at S.T.P
   a) 22.4 litre b) 2.24 litre c) 0.24 litre d) 0.1 litre
5. If the difference in electronegativity between two atoms is less than 1.7, then the bond is .....
   a) Ionic bond b) covalent bond c) chemical bond
   d) coordinate covalent bond
6. Which of the following is hygroscopic in nature?
   a) ferric chloride b) silica gel c) copper sulphate penta hydrate
   d) glucose in water
7. Casparian strips are present in the ..... of the root.
   a) Cortext b) pith c) pericycle d) endodermis
8. Mammals are ..... animals.
   a) cold blooded b) warm blooded c) poikilo thermic d) all the above
9. The heart of fishes possess ..... chambers.
   a) 4 b) 2 c) 3
   d) incomplete four chambered
10. Bipolar neutrons are found in
    a) retina of eye b) cerebral corter c) embryo d) respiratory epithelium
11. Which among the following hormone is a cause of interrupting sleep?
    a) Adrenaline b) melatonin c) thyroxine d) oxytocin
12. Okasaki fragrments are joined together by .....
    a) Helicase b) DNA polymerase c) RNA primer d) DNA ligase

II. Answer any 7 questions. (Question Number 22 compulsory) **7 x 2 = 14**

13. Differentiate convex lens and concave lens.
14. State the law of volume.
15. Match the following:

Component	Symbol used
i) Resistor	- 
ii) Rheostat	- 
iii) Ammeter	- 
iv) Voltmeter	- 

16. Define atomicity and give an example.
17. Mention the uses of Aluminium
18. Draw the following diagram and identify the parts.



19. Why are the rings of cartilages found in trachea of rabbit?
20. Give reason: Minerals in the plants are not lost when the leaf falls.
21. What is the role of parathormone?
22. Find the amount of urea which is to be dissolved in water to get 500g of 10% w/w aqueous solution?

III. Answer any 7 questions (Question Number 32 compulsory): 7 x 4 = 28

23. a) Define dispersion of light (2)
    b) Define one calorie (2)
24. a) State ohm's law (2)
    b) A piece of wire of resistance 10 ohm is drawn out so that its length is increased to three times its original length. Calculate the new resistance. (2)
25. What are the difference between atoms and molecules.
26. a) What is rust? Give the equation for formation of rust.
    b) State two conditions necessary for rusting of iron.
27. a) A hot saturated solution of copper sulphur forms crystals as it cools. Why? (2)
    b) Vinu dissolved 50 g of sugar in 250ml of hot water, Sarath dissolves 50g of same sugar in 250ml of cold water. Who will get faster dissolution of sugar? and why? (2)
28. Differentiate between Monocot root and dicot root.
29. Enumerate the functions of blood.
30. Write the physiological effects of gibberellins.
31. a) What do you understand by the term phenotype and genotype? (2)
    b) Wha are allosomes?
32. The ratio of masses of two planets is 2:3 and the ratio of thier radii is 4:7. Find the ratio of their accelerations due to gravity.

VI. Answer all the questions (Draw diagrams wherever necessary): 3 x 7 = 21

33. a) State and prove the law of conservationof linear momentum. **(OR)**
    b) i) What is meant by electric current? (2)
    ii) Name and define its unit.
    iii) Which instrument is used to measure the electric current? How should it be connected in a current?
34. a) Derive the relationship between relative molecular mass and vapour density.

(OR)

    b) i) State the reason for addition of caustic alkali to bauxite ore during prurification of bauxite. (2)
    ii) Identify the bond between H and F in HF molecule.
    iii) Write notes on (a) saturated solution b) unsaturated solution (4)
35. a) With a neat labelled diagram describe the parts of a typical angiosperimic ovule.

(OR)

    b) i) Illustrate the structure and functions of brain.
    ii) Sanjay is sitting in the exam hall. Before the start of the exam, he sweats a lot, with increased rate of heart beat. Why does this condition occur?
