

FIRST REVISION TEST - 2024

B

Standard - X

SCIENCE

Marks:75

Time: 3.00 hrs

Part - I

12x1=12

Note: 1) Answer all the questions.
2) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

- Newton's III law is applicable
 - for a body at a rest
 - for a body in motion
 - both a & b
 - only for bodies with equal masses
- If a substance is heated or cooled, the change in mass of that substance is
 - positive
 - negative
 - zero
 - none of the above
- Kilowatt hour is the unit of
 - resistivity
 - conductivity
 - Electrical Energy
 - electrical power
- Which of the following is a triatomic molecule?
 - Glucose
 - Helium
 - Carbon dioxide
 - Hydrogen
- Which of the following is the universal solvent?
 - Acetone
 - Benzene
 - Water
 - Alcohol
- Rectified spirit is an aqueous solution of which contains about _____ of ethanol.
 - 95.5%
 - 75.5%
 - 55.5%
 - 45.5%
- Which is formed during anaerobic respiration?
 - Carbohydrates
 - Ethyl alcohol
 - Acetyl CoA
 - Pyruvate
- Heart of heart is called
 - SA node
 - AV node
 - Purkinje fibres
 - Bundle of HIS
- Which one is referred as "Master Gland"?
 - Pineal gland
 - Pituitary gland
 - Thyroid gland
 - Adrenal gland
- The Centromere is found at the Centre of the _____ chromosome.
 - Telo centric
 - Meta centric
 - Sub Meta centric
 - Aero centric
- The Miracle rice which saved millions of lives and celebrated its 50th Birthday is
 - IR 8
 - IR 24
 - Atomita 2
 - Ponni
- An inexhaustible resources is
 - Wind Power
 - Soil fertility
 - Wild life
 - all the above

Part - II

Note: Answer any 7 of the following. Q.No. 22 is compulsory. $7 \times 2 = 14$

- Differentiate Mass and Weight.
- What is refractive index? $\mu = \frac{\text{Speed of light in Vacuum (c)}}{\text{Speed of light in medium (v)}}$
- State Boyle's law? $P \propto \frac{1}{V}$
- Define atomicity? The no of atoms in one molecule of element
- List out the Parasitic adaptations in Leech?
- Name the parts of the hind Brain? Cerebrum, Pons, Medulla
- Write the characteristics of the insect pollinated flowers? Bright colour, pleasant smell
- Give the name of Wheat variety having higher dietary fibre and Protein? Triticale (6n)
- Write a short note on editor and its main parts?
- Calculate the amount of energy released when a radioactive substance undergoes fusion and results in a mass defect of 2kg?

$$E = mc^2$$

$$= 2 \times (3 \times 10^8)^2 = 2 \times 9 \times 10^{16}$$

$$= 18 \times 10^{16} \text{ or } 1.8 \times 10^{17} \text{ J.}$$

(2)

Part III

X Science

7x4=28

Note: Answer any 7 of the following. Q.No. 32 is compulsory

23. State Newton's law of Motion?
24. Differentiate the eye defect; Myopia, and Hyper Metropia?
25. a) Name three animals which can hear Ultrasonic Vibrations. *Bat, Dolphin, Pogs*
 b) What is the audible range of frequency? *20 Hz to 20000 Hz*
26. a) What is rust? Give the equation for rustification?
 b) State two conditions necessary for rusting of Iron?
27. What is called homologous series? Give any three of its characteristics?
28. a) What is photosynthesis and where in a cell does it occur?
 b) What is respiratory Quotient?
29. Enumerate the functions of blood?
30. How will you prevent soil erosion?
31. Explain the structure of chromosomes?
32. A solution is prepared by dissolving
 a) 45gm of sugar in 180gm of water. Calculate the Mass Percentage of the solute?
 b) Calculate the PH of 0.01M HNO_3

$$\frac{45}{45+180} \times 100 = \frac{45}{225} \times 100 = 20\% \quad (\text{Ans})$$

$$\text{PH} = -\log_{10}(1 \times 10^{-2})$$

$$\text{Part IV} = 0 + 2 \log_{10} 10 = 0 + 2 = 2 \quad (\text{Ans})$$

Note: Answer all the questions. Draw a diagram wherever necessary. 3x7=21

33. a) i) What is meant by electric current?
 ii) Name and define its unit?
 iii) Which Instrument is used to Measure the electric current? How should it be connected in a circuit?
- OR
- b) i) Compare the properties of alpha, beta, Gamma radiations?
 ii) Give the functions of control rods in a Nuclear reactor?
34. a) i) Write the different types of Isotopes of oxygen and its Percentage?
 ii) Calculate the percentage of Sulphur in H_2SO_4 .
 iii) In what way hygroscopic substances differ from deliquescent substances.

OR

- b) i) Explain the types of double displacement reactions with examples.
 ii) Differentiate reversible and Irreversible reactions?
 iii) Arrive at systematically the IUPAC name of the compound
 $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$
35. a) i) What is parthirocaspic fruits? Give an example.
 ii) Why are thyroid Hormones referred as personality hormones?
 iii) Natural selection is the driving force for evolution why?

OR

- b) i) Differentiate between outbreeding and inbreeding?
 ii) Suggest measures to overcome the problem of an alcoholic.