

Class : 10Register
Number

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COMMON HALF YEARLY EXAMINATION, 2025 - 26

Time Allowed : 3.00 Hours]

SCIENCE

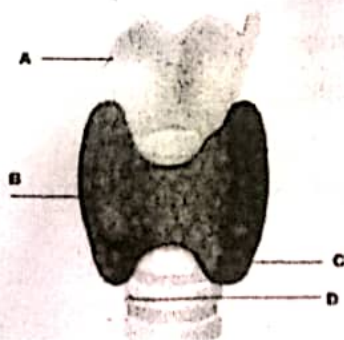
[Max. Marks : 75

PART - I**I. Answer to all the questions****12X1=12**

1. Newton's III law is applicable
 - a) for a body is at rest
 - b) for a body in motion
 - c) both a & b
 - d) only for bodies with equal masses
2. In a simple circuit, why does the bulb glow when you close the switch?
 - a) The switch produces electricity
 - b) Closing the switch completes the circuit.
 - c) Closing the switch breaks the circuit
 - d) The bulb is getting charged.
3. which of the following isotope can be cure Anemia
 - a) Iron - 59
 - b) Sodium - 24
 - c) Iodine - 131
 - d) Cobalt - 60
4. which of the following group contains the member of halogen family.
 - a) 17th
 - b) 15th
 - c) 18th
 - d) 16th
5. Solubility of NaCl in 100 ml water is 36 g. If 25 g of salt is dissolved in 100 ml of water how much more salt is required for saturation -----
 - a) 12 g
 - b) 11g
 - c) 16g
 - d) 20g
6. which of the following factor influencing the rate of a reaction
 - a) Temperature
 - b) Catalyst
 - c) Pressure
 - d) all the above
7. Which is formed during anaerobic respiration
 - a) Carbohydrate
 - b) Ethyl alcohol
 - b) Acetyl CoA
 - d) Pyruvate
8. which one of the following blood cells number increases during conditions of **allergy**
 - a) Neutrophils
 - b) Eosinophils
 - c) Basophils
 - d) Lymphocytes
9. Node of Ranvier is found in
 - a) muscles
 - b) axons
 - c) dendrites
 - d) cyton
10. Which one of the following hormones is naturally not found in plants:
 - a) 2, 4-D
 - b) GA3
 - c) Gibberellin
 - d) IAA
11. Excessive consumption of alcohol leads to
 - a) Loss of memory
 - b) Cirrhosis of liver
 - c) State of hallucination
 - d) Supression of brain function
12. A renewable source of energy is
 - a) petroleum
 - b) coal
 - c) nuclear fuel
 - d) solar energy

PART - II**II. Answer to any seven questions.****7X2=14****(question no. 22 is compulsory)**

13. State Ohm's law.
14. Name three animals, which can hear ultrasonic vibrations
15. What is Molar volume of a gas?
16. Differentiate reversible and irreversible reactions
17. Name the parts of the hind brain.

18. Identify the parts A, B, C and D

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19. How can you determine the age of the fossils?
20. State the applications of DNA fingerprinting technique.
21. What is Sprite?
22. A charge of 12 coulomb flows through a bulb in 5 second. What is the current through the bulb? 2.4 A

PART - III**7X4=28****III. Answer to any seven questions.****(question no. 32 is compulsory)**

23. Give any four of the applications of universal law gravitation.
24. i) Define one calorie.
- ii) What is co-efficient of apparent expansion?
25. i) Give any two uses of radio isotopes in the field of agriculture?
- ii) a) The energy released in a nuclear fission process is about 3.84×10^{-12} J
b) Name of The nuclear bomb that was dropped in Hiroshima during World War II Atom Bomb
26. i) **Match the following**

a) Galvanisation	- Noble gas elements	4
b) Calcination	- Coating with Zn	1
c) Dental filling	- Heating in the absence of air	2
d) Group 18 elements	- Silver-tin amalgam	3
- ii) Give the equation for formation of rust.
27. i) What happens when $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ is heated? Write the appropriate equation
- ii) Define solubility
28. Describe the structure of spinal cord
29. i) Write the characteristics of insect pollinated flowers.
- ii) What is colostrum?
30. Explain the structure of a chromosome.
31. Discuss the importance of biotechnology in the field of medicine.
32. i) calculate gram mass of 2 moles of hydrogen molecule 2
- ii) Calculate the % of oxygen in $\text{Al}_2(\text{SO}_4)_3$.
(Atomic mass: (Al - 27, O -16, S - 32) 46.78

PART - IV**IV. Answer to all the questions.****3X7= 21**

33. (a) i) List any five properties of light
- ii) Why does the sky appear in blue colour?

(OR)

- (b) i) What is a nuclear reactor? Explain its essential parts with their functions.
- ii) Write any two elements which are used for inducing radioactivity?

34. (a) i) Write notes on various factors affecting solubility.
- ii) The aquatic animals live more in cold region Why?

(OR)

- (b) i) Arrive at, systematically, the IUPAC name of the compound: $\text{CH}_3\text{--CH}_2\text{--CH}_2\text{--OH}$.
- ii) Differentiate soaps and detergents

35. (a) i) Differentiate Aerobic and Anaerobic respiration
- ii) List out any three of the parasitic adaptations in leech

(OR)

- (b) i) What are the various routes by which transmission of HIV takes place?
- ii) How are e-wastes generated?
- iii) list out 3R Approach.

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