COMMON FIRST REVISION TEST - 2023

Standard X

SCIENCE

Reg.No. | | | | | | |

Time: 3.00 hours *Marks: 75*

Part - I

I Choose the correct 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. Kilowatt hour is a unit of
   a) resistivity b) conductivity c) electrical energy d) electrical power
3. The frequency which is audible to the human ear is
   a) 50 KHz b) 20 KHz c) 15000 KH d) 10000 KHz
4. Gamma radiations are dangerous because
   a) it affects eyes and bones b) It affect tissues
   c) it produce genetic disorder d) it produces enormous amount of heat
5. Which of the following have inert gases 2 electrons in the outermost shell?
   a) He b) Ne c) Ar d) Kr
6. The secondary suffix used in IUPAC nomenclature and aldehyde is _____.
   a) –ol b) –oic acid c) –al d) –one
7. Which of the following is hydroscopic in nature?
   a) ferric chloride b) copper sulphate pentahydrate
   c) silica gel d) none of the above
8. Which of the following are used as anaesthetics?
   a) carboxylic acid b) ethers c) esters d) aldehydes
9. Which one of the following hormones is naturally not found in plants?
   a) 2,4-D b) GA_3 c) Gibberellin d) IAA
10. The 'Use and disuse Theory' was proposed by _____.
    a) Charles Darwin b) Ernst Haeckel
    c) Jean Baptiste Lamarck d) Gregor Mendel
11. Polyphapia is a condition seen in _____.
    a) obesity b) diabetes mellitus
    c) diabetes insipidus d) AIDS
12. Global warming will cause
    a) raise in level of oceans b) melting of glaciers
    c) sinking of islands d) all of these

Part - II

II. Answer any 7 questions: (Q.No.22 is compulsory) **7 x 2 = 14**

13. State Newton's second law.
14. Define Dispersion of light.
15. Distinguish between ideal gas and real gas.

16. Define Atomicity.
17. What is rust? Give the equations for formation of rust.
18. Why does the reaction rate of a reaction increases on raising the temperature?
19. Why should the light dependent reaction occur before the light independent reaction?
20. How are arteries and veins structurally different from one another?
21. Differentiate between medullated and a non-medullated nerve fibre.
22. If a 5 N and 15 N forces are acting opposite to one another. Find the resultant force and the direction of action of the resultant force.

Part - III

III. Answer any 7 questions: (Q.No.32 is compulsory) **7 x 4 = 28**

23. Why a spanner with a long handle is preferred to tighten screws in heavy vehicles?
24. Draw a ray diagram to show the image formed by a convex lens when the object is placed between f and 2f.
25. Write any three features of natural and artificial radioactivity.
26. Give an example each :
    a) gas in liquid b) solid in liquid c) solid in solid d) gas in gas
27. a) The aquatic animals live more in cold region. Why?
    b) Classify the following substances into deliquescent hydroscopic, conc.sulphuric acid, copper sulphate penta hydrate, silica gel, calcium chloride and gypsum salt.
28. How do detergents cause water pollution? Suggest remedial measures to prevent this pollution.
29. Draw and label the structure of oxysomes.
30. What are Okazaki fragments?
31. What is the importance of rain water harvesting?
32. The hydroxide Ion concentration of a solution is 1×10^{-11} M. What is the pH of the solution?

Part - IV

IV. Answer all the questions: **3 x 7 = 21**

33. a) Derive the ideal gas equation.

(OR)

b) What is nuclear reactor? Explain its essential parts and their functions.

34. a) Give the salient features of "Modern atomic theory"

(OR)

b) Explain the types of double displacement reaction with example.

35. a) With a neat labelled diagram, describe the parts of a typical angiospermic ovule.

(OR)

b) How is the structure of DNA organised? What is the biological significance of DNA?

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