FIRST REVISION EXAMINATION - 2024

Class : 10

Time : 3-00 Hours

SCIENCE

Reg.No

Marks : 75

PART – I

I) Choose the correct answer.   12 x 1 = 12

1. One kilogram force equals to
   a) 9.8 dyne   b) 9.8 x 10⁴N   c) 98 x 10⁴dyne   d) 980 dyne

2. The frequency which is audible to the human ear is _____
   a) 50 KHz   b) 20 KHz   c) 15000 KHz   d) 10000 KHz

3. _____ aprons are used to protect us from gamma radiations.
   a) Lead oxide   b) Lead   c) Iron   d) Aluminium

4. Which of the following is a triatomic molecule
   a) Glucose   b) Helium   c) Carbon dioxide   d) Hydrogen

5. Rectified spirit is an aqueous solution which contains about _____ of ethanol .
   a) 95.5 %   b) 75.5 %   c) 55.5 %   d) 45.5 %

6. ____ is an important metal used in amalgam
   a) silver   b) tin   c) sodium   d) mercury

7. Which of the following is the universal solvent?
   a) Acetone   b) Benzene   c) water   d) Alcohol

8. The outermost of the three cranial meninges is
   a) arachnoid membrane   b) piamater   c) duramater   d) myelin sheath

9. _____ is ATP factory of the cells
   a) chloroplast   b) cytoplasam   c) mitochondria   d) nucleus

10. Syngamy results in the formation of _____
    a) Zoospores   b) Conidia   c) Zygote   d) Chlamydospores

11. World 'AIDS Day' is observed on _____
    a) May 31   b) June 6   c) April 22   d) December 1

12. All files are stored in _____.
    a) folder   b) box   c) paint   d) scanner

PART – II

II Answer any 7 questions. Question Number 22 is compulsory.   7 x 2 = 14

13. State Rayleigh's law of scattering.

14. Give any two uses of radio isotopes in the field of agriculture.

15. Write the Esterification reaction.

16. Fill in the blanks.
    a) The chemical name of rust is _____.
    b) 100% pure ethanol is called _____.

17. Differentiate reversible and irreversible reactions.

18. Who discovered Rh factor? why was it named so.

19. What is the importance of valves in the heart?

20. What is respiratory quotient?

21. Draw and label the structure of pollen grain.

22. A person with myopia can see objects placed at a distance of 4m. If he wants to see objects at a distance of 20m, what should be the focal length of the lens.

PART – III

III Answer any 7 questions. Question Number 32 is compulsory.   **7 x 4 = 28**

23. Differentiate Myopia and Hypermetropia.

24. List out the advantages of LED bulb.

25. Write the difference between Nuclear fission and Nuclear fusion.

26. Write the applications of Avogadro's law.

27. In what way hygroscopic substance differ from deliquescence substances

28. Write the difference between soap and detergent

29. What is transpiration? Give the importance of transpiration.

30. Classify neurons based on its structure.

31. How does rainwater harvesting structures recharge ground water?

32. Calculate the number of moles.

    i) 27 g Al

    ii) 1.51×10^{23} molecules of NH_4Cl

PART – IV

Answer all the questions.   **3 x 7 = 21**
(Each question carries 7 marks. Draw diagram wherever necessary).

33. a)   i) State the universal law of gravitation and derive its mathematical expression.

        ii) Differentiate mass and weight

                [OR]

    b)   i) What is Nuclear reactor? Explain its essential parts with their functions.

        ii) What is the minimum distance needed for an echo.

34. a)   Derive the relationship between relative molecular mass and vapour density.

                [OR]

    b)   i) Give the balanced chemical equation of the following reactions.

        a) Neutralization of NaOH with ethanoic acid.

        b) Evolution of carbon dioxide by the action of ethanoic acid with $NaHCO_3$

        ii) What are called thermolysis reaction?

35. a)   i) Explain female reproductive system of rabbit.

        ii) What are allosomes?

                [OR]

    b)   i) With neat labelled diagram describe the parts of a typical angiospermic ovule.

        ii) Mention the diseases caused by tobacco smoke.

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