COMMON QUARTERLY EXAMINATION - 2024

Standard IX

Reg.No. | | | | | | |

SCIENCE

26/9/24

Time : 3.00 hrs **Part - I** **Marks : 75**

I. Answer all the questions. **12 x 1 = 12**

1. 1 metric ton is equal to
   a) 100 quintals b) 10 quintals c) $\frac{1}{10}$ quintals d) $\frac{1}{100}$ quintals
2. The centrifugal force is
   a) a real force b) the force of reaction of centripetal force
   c) a virtual force d) directed towards the centre of the circular path
3. Clouds float in atmosphere because of their low
   a) density b) pressure c) velocity d) mass
4. Among the following, _____ is a mixture.
   a) common salt b) juice c) carbon dioxide d) pure silver
5. The term nucleon refer to
   a) protons and electrons b) only neutrons
   c) electrons and neutrons d) protons and neutrons
6. Elements in the modern periodic table are arranged in _____ groups and _____ periods.
   a) 7, 18 b) 18, 7 c) 17, 8 d) 8, 17
7. Identify the animal having four chambered heart
   a) lizard b) snake c) crocodile d) calotes
8. Smooth muscles occur in
   a) uterus b) artery c) vein d) all the above
9. Companion cells are closely associated with
   a) sieve elements b) vessel elements c) trichomes d) guard cells
10. Chlorophyll in a leaf is required for _____.
    a) photosynthesis b) tropic movements
    c) transpiration d) nastic movements
11. Transpiration takes place through _____.
    a) fruit b) seed c) flower d) stomata
12. Air sacs and pneumatic bones are seen in _____.
    a) fish b) frog c) bird d) bat

Part - II

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

13. Define Least count of any device.
14. State Pascal's law.
15. Define Sublimation.
16. State Modern periodic law.
17. Why are frogs said to be amphibians?

18. ***Match the following :***

A) Coelenterata	-	i) Snail
B) Platyhelminthes	-	ii) Starfish
C) Echinodermata	-	iii) Tapeworm
D) Mollusca	-	iv) Hydra

19. Why should gametes be produced by meiosis during sexual reproduction?

20. $6CO_2$ + _____ $\xrightarrow[\text{Chlorophyll}]{\text{Sunlight}}$ _____ + $6O_2\uparrow$

21. Differentiate Photonasty from Phototropism.

22. Calculate the atomic number of an element whose mass number is 39 and the number of neutrons is 20. Find the name of the element.

Part - III

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

23. Differentiate mass and weight.

24. i) State the laws of floatation ii) What is meant by atmospheric pressure?

25. How are homogeneous solutions different from heterogenous solution? Explain with examples.

26. Give an account on phylum annelida.

27. List five characteristic features of fishes.

28. List out the differences between Mitosis and Meiosis.

29. How will you differentiate the different types of transpiration?

30. Differentiate between tropic and nastic movements.

31. Draw the structure of oxygen and sulphur atoms.

32. A 900 kg car moving at 10 ms^{-1} takes a turn around a circle with a radius of 25 m. Determine the acceleration and the net force acting upon the car.

Part - IV

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

(Draw diagrams wherever necessary)

33. a) Write the rules that are followed in writing the symbols of units in the SI system.

(OR)

b) Explain the construction and working of a hydrometer with diagram.

34. a) Explain the postulates of Bohr's atomic model.

(OR)

b) i) What are the limitations of Mendeleev's periodic table. (4)

ii) Write the differences between elements and compounds. (3)

35. a) Give an account on Phylum Arthropoda.

(OR)

b) What are permanent tissues? Describe the different types of simple permanent tissues.

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