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Half yearly Common Examination – 2022

Science

IX Standard

Time : 3 Hrs

Marks : 75

Part- I

Note: i) Answer all the questions.

12 X 1 = 12

ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

- The area under velocity – time graph represents the
 - velocity of the moving object.
 - displacement covered by the moving object,
 - speed of the moving object.
 - acceleration of the moving object.
- The size of an air bubble rising up in the water
 - decreases
 - increases
 - remains the same
 - may increase or decrease
- Which of the following converts electrical energy into mechanical energy?
 - Motor
 - Battery
 - Generator
 - Switch
- _____ has the same properties throughout the sample.
 - Pure substance
 - Mixture
 - Colloid
 - Suspension
- Electronic configuration of Potassium is _____
 - 2,8,9
 - 2,8,1
 - 2,8,8,1
 - 2,8,8,3
- Acids in rocks and minerals are _____
 - Inorganic acids
 - Strong acids
 - Organic acids
 - a & b
- The animal without skull is
 - Acrania
 - Acephalia
 - Apteria
 - Acoelomate
- Aerenchyma is found in
 - epiphytes
 - hydrophytes
 - halophytes
 - xerophytes

9. Chlorophyll in a leaf is required for _____
 (a) photosynthesis (b) tropic movement
 (c) transpiration (d) nastic movement
10. Which of the following is not a salivary gland?
 (a) Sublingual (b) Lachrymal
 (c) Submaxillary (d) Parotid
11. Diphtheria affects the
 (a) lungs (b) throat
 (c) blood (d) liver
12. A presentation consists of many _____
 (a) Pages (b) Slides
 (c) Placeholders (d) Messages

Part - II

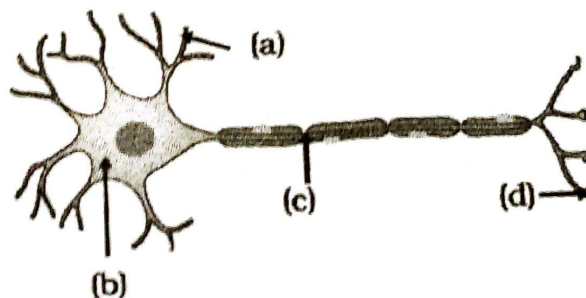
Note: Answer any seven questions. Question No. 22 is compulsory.

7 × 2 = 14

13. Match the following.

Column I	Column II
(a) Length	- 1. kelvin
(b) Mass	- 2. metre
(c) Time	- 3. kilogram
(d) Temperature	- 4. second

14. Why it is easy to swim in river water than in seawater?
15. Name any two appliances which work under the principle of heating effect of current.
16. A few drops of 'Dettol' when added to water the mixture turns turbid. Why?
17. State whether true or false. If false, correct the statement:
 a) Group 17 elements are named as Halogens. **T**
 b) The maximum number of electrons in L shell is 10 **F**
18. How does locomotion take place in starfish?
19. Identify a, b, c and d in the given diagram.



20. A statement of an Assertion is given and a corresponding Reason is given just below it. Of the statements given below, the correct answer is:

Assertion(A): Haemoglobin contains iron.

Reason(R): Iron deficiency leads to anaemia.

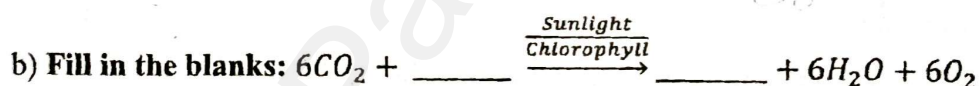
- (a) If both A and R are true; and the R is the correct explanation of A
 (b) If both A and R are true; but R is not the correct explanation of A
 (c) If A is true; but R is false
 (d) If both A and R is false
21. Distinguish between Virion and Viroid.
22. Find the oxidation number of C in CO_2

Part - III

Note: Answer any seven questions. Question No. 32 is compulsory.

$7 \times 4 = 28$

23. Write the rules that are followed in writing the symbols of units in SI system.
24. a) State Fleming's Left-Hand Rule.
 b) State any two advantages of AC over DC.
25. a) State the Gay Lussac's Law of combining volumes. Explain with an Illustration.
 b) Write any two differences between elements and compounds with example.
26. Explain the Octet rule with an example.
27. Draw the structure of oxygen and sulphur atoms.
28. a) Why are frogs said to be amphibians?



29. List out the differences between mitosis and meiosis.
30. a) Differentiate: Excretion and Secretion
 b) Mention any two vital functions of the human kidney
31. Fill in the blanks with suitable answers:

Vitamins	Rich source	Deficiency disease
Calciferol		Rickets
	Papaya	Night blindness
Ascorbic acid		

32. Rubbing a comb on hair makes the comb get – 0.4C.
- (a) Find which material has lost electron and which one gained it.
 (b) Find how many electrons are transferred in this process.

Part – IV

Note: Answer all the questions. Draw diagrams wherever necessary.

3 × 7 = 21

33. Derive the equations of motion by graphical method.

(or)

Draw ray diagrams to show how the image is formed using a concave mirror, when the position of object is (i) **at C** (ii) **between C and F**. Mention the position and nature of image in each case.

34. a) State any five features of the modern periodic table.

b) Sulphuric acid is called King of Chemicals. Why is it called so?

(or)

List down the differences between Ionic and Covalent compounds.

35. a) Explain the types of the meristems based on position with suitable diagram.

b) Write the functions of meristems.

(or)

a) Rani suffered from typhoid while, Sachin suffered from tuberculosis. Which disease could have caused more damage and why?

b) Give an account of classification, of bacteria based on the shape.
