

Tsi9S

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Tenkasi District

Common Half Yearly Examination - 2023



### Standard 9 SCIENCE

Time: 3.00 Hours

Marks: 75

12x1=12

#### I. Choose the best answer

- 1) Which among the following is not a device to measure mass?
  - a) spring balance
  - b) Beam balance
  - c) Physical balance
  - d) Digital balance
- 2) The area under velocity - time graph represents the .....
  - a) velocity of the moving object
  - b) displacement covered by the moving object
  - c) speed of the moving object
  - d) acceleration of the moving object
- 3) Heating effect of current is called .....
  - a) Joule heating
  - b) Coulomb heating
  - c) Voltage heating
  - d) Ampere heating
- 4) Transformer works on .....
  - a) Ac only
  - b) DC only
  - c) Both AC and DC
- 5) Change in the number of neutrons in an atom changes it to .....
  - a) an ion
  - b) an isotope
  - c) an isobar
  - d) another element
- 6) Modern periodic law states that the physical and chemical properties of elements are the periodic function of their .....
  - a) atomic numbers
  - b) atomic masses
  - c) similarities
  - d) anomalies
- 7) Bond formed between a metal and non metal atom is usually .....
  - a) ionic bond
  - b) covalent bond
  - c) coordinate bond
- 8) Aerenchyma is found in .....
  - a) epiphytes
  - b) hydrophytes
  - c) halophytes
  - d) xerophytes
- 9) Chlorophyll in a leaf is required for .....
  - a) photosynthesis
  - b) trophic movement
  - c) transpiration
  - d) nastic movement
- 10) To prevent the entry of food into the trachea, the opening is guarded by .....
  - a) epiglottics
  - b) glottis
  - c) hard palate
  - d) soft palate
- 11) An internal factor responsible for spoilage of food is .....
  - a) wax coating
  - b) contaminated utensils
  - c) moisture content in food
  - d) synthetic preservation
- 12) The slides are grouped together in a sequence to form .....
  - a) Slie show
  - b) Sharts
  - c) page
  - d) messages

#### II. Answer any seven questions. [Q.No: 22 compulsory]

7x2=14

- 13) Differentiate Mass and Weight.
- 14) Fill in the blanks.
  - a) Electrons move from ..... potential to ..... potential
  - b) The direction opposite to the movement of electron is called ..... current
- 15) State the advantages of ac over dc.
- 16) Why do  $^{35}_{17}\text{Cl}$  and  $^{37}_{17}\text{Cl}$  have the same chemical properties? In What respect do these atoms differ?
- 17) **Match**

i) Alkali metals	-	Newlands
ii) Law of octaves	-	Calcium
iii) Alkaline earthmetal	-	Henry Mosley
iv) Modern Periodic law	-	Sodium
- 18) How do atoms attain noble gas configuration?
- 19) Define tanspiration
- 20) **Assertion** : Urea is excreted out through the kidneys  
**Reason** : Urea is a toxic substance  
**Mark the correct answer as**



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- a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion  
 b) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion  
 c) Assertion is true but Reason is false  
 d) Both Assertion and Reason are false

**State true or false. If false, correct the statement**

- 21) a) Iron is required for the proper functioning of thyroid gland  
 b) Vitamin C is a water soluble vitamin.  
 22) An athlete completes one round of a circular track of diameter 200m in 40s. What will be the distance covered and the displacement at the end of 2m and 20s?

**III. Answer any seven questions. [Q.No: 32 compulsory]**

**7x4=28**

- 23) Explain the different types of motion  
 24) State Faraday's Laws of electromagnetic induction.  
 25) What are nucleons? How many nucleons are present in phosphorous? Draw its structure  
 26) What are the limitations of Mendeleev's periodic table?  
 27) List down the differences between ionic and covalent compounds  
 28) a) Match  
 i) Sclereids - Xylem 3  
 ii) Chloroplast - Sclerenchyma 2  
 iii) Simple tissue - Chlorenchyma 4  
 iv) Trachieds - Collenchyma 1  
 b) (i) Parenchyma, Chlorenchyma, Collenchyma, Sclerenchyma are ..... type of tissue.  
 (ii) ..... and ..... are complex tissue.  
 29) Differentiate Phototropism from phototonasty.  
 30) a) We do we sweat?  
 b) Mention any two vital functions of human kidney.  
 31) a) What is an adulterant?  
 b) What are the effects of consuming adulterated food?  
 32) Complete the following

Atomic Number	Mass Number	Number of neutrons	Number of protons	Number of Electrons	Name of the element
9	19	10	9	9	-
16	32	16	16	16	-
12	24	12	12	12	Magnesium
1	2	1	1	1	-

**IV. Answer all the questions:**

**3x7=21**

- 33) a) How does an object's density determine whether the object will sink or float in water?  
 b) Why it is easy to swim in river water than in sea water?  
 (OR)  
 a) Draw the ray diagram 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 (iii) between F and P of the mirror.  
 b) Mention the position and nature of image in each case  
 34) Explain Tyndall effect and Brownian movement with suitable diagram  
 (OR)  
 Explain the tests to identify Acids and Bases  
 35) a) Are Jellyfish and Starfish similar to fishes? If no justify the answer  
 b) List five characteristic features of fishes.

(OR)

Describe the role of microbes in agriculture and industries.