Tsi9S

Tenkasi District
Common Half Yearly Examination - December 2025

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Standard 9
SCIENCE
Part-A

Time Allowed: 3.00 Hours

Maximum Marks: 75

12×1=12

I. Choose the correct answer:

1) The thickness of a cricket ball is measured by _____.
   a) Screw gauge
   b) Ruler
   c) Vernier caliper
   d) Beam balance

2) The size of an air bubble rising up in water
   a) decreases
   b) increases
   c) remains same
   d) may increase or decrease

3) Heating effect of current is called _____.
   a) Joule heating
   b) Coulomb heating
   c) Voltage heating
   d) Ampere heating

4) The speed of light is maximum in
   a) glass
   b) vaccum
   c) diamond
   d) graphite

5) When we mix a drop of ink in water we get a _____.
   a) Heterogeneous mixture
   b) Compound
   c) Homogeneous mixture
   d) Suspension

6) Modern periodic law states that the physical and chemical properties of elements are the periodic functions of their
   a) atomic numbers
   b) atomic masses
   c) similarities
   d) anomaties

7) Oxidising agents are also called as _____ because they remove electrons to form other substances.
   a) electron donors
   b) electron acceptors
   c) electron pairs
   d) none of these

8) $Zn + 2 HCl \rightarrow ZnCl_2 + ...\uparrow$
   a) H_2
   b) O_2
   c) CO_2
   d) NO_2

9) Nerve cell does not contains
   a) axon
   b) nerve endings
   c) tendons
   d) dendrites

10) A growing seedling is kept in the dark room. A burning candle is placed near it for a few days. The top part of the seedling bends towards the burning candle. This is an example of _____.
   a) Chemotropism
   b) Geotropism
   c) Phototropism
   d) Thigmotropism

11) To prevent the entry of food into the trachea, the opening is guarded by _____.
   a) epiglottis
   b) glottis
   c) hard palate
   d) soft palate

12) Microbes that generally enter the body through nose are likely to affect
   a) gut
   b) lungs
   c) liver
   d) lymph nodes

Part-B

7×2=14

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

13) Write the need of a standard unit.

14) Write the spherical mirror formula and explain the meaning of each symbol used in it.

15) What is the same about the electron structures of :
   a) Lithium, Sodium and Potassium
   b) Beryllium, Magnesium and Calcium

16) **Fill in the blanks:**
   a) Noble gases belong to _____ group of periodic table.
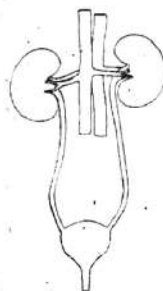   b) Example for liquid metal is _____.

17) **Correct the mistakes:**
   a) Washing soda is used for making cakes and bread soft, spongy.
   b) Calcium sulphate hemihydrate is used in textile industry for bleaching cloths.

18) Mention the most abundant muscular tissue found on our body. State its function.

19) **Label the following parts in the given diagram.**
   [left kidney, right kidney, ureter, urinary bladder]

20) What are the effects of consuming adulterated food?

21) Name the organism causing diarrhoeal disease and give one precaution against it.

22) If 25 C of charge is determined to pass through a wire of any cross section in 50 S. What is the measure of current?

Part-C

$7 \times 4 = 28$

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

23) How will you measure the least count of a vernier caliper?

24) Compare speed and velocity.

25) a) Why does a helium balloon float in air?
   b) State pascal's law.

26) How are homogeneous solutions different from heterogeneous solution? Explain with examples.

27) What are nucleons? How many nucleons are present in phosphorous? Draw its structure.

28) **Identify the compounds as Ionic / covalent / co-ordinate based on the given characteristics.**
   a) Soluble in non-polar solvents
   b) Undergoes faster instantaneous reactions
   c) Non-conductors of electricity
   d) Solids at room temperature

29) Comment on the aquatic and terrestrial habits of amphibians.

30) What is the difference between movement of flower in sunflower plant and closing the leaves in Mimosa pudica?

31) Give an account of classification of bacteria based the shape.

32) The primary coil of a transformer has 800 turns the secondary coil has 8 turns. It is connected to the 220 V ac supply. What will be the output voltage?

Part-D

$3 \times 7 = 21$

IV. Answer in Detail:

33) a) Explain the construction and working of a hydrometer with diagram.   **(OR)**
   b) i) 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 (iii) between F and P of the mirror
   ii) Mention the position and nature of image in each case.

34) a) Explain the postulates of Bohr's atomic model.   **(OR)**
   b) Give the tests to identify Acids and Bases.

35) a) Write about the elements of xylem.   **(OR)**
   b) Describe the role of microbes in agriculture and industries.