This Question Paper contains 12 printed pages.
(Sections - A, B, C & D)

Sl.No.

11 (E)

(FEBRUARY-MARCH, 2025)

Time : 3 Hours] *[Maximum Marks : 80*

Instructions :

1) **Write in a clear legible handwriting.**
2) **This question paper has four Sections A, B, C & D and Question Numbers from 1 to 54.**
3) **All questions are compulsory. There are only internal options.**
4) **The numbers to the right represent the marks of the question.**
5) **Draw neat diagrams wherever necessary.**
6) **New sections should be written in a new page. Write the answers in numerical order.**
7) **For diagram / chart based questions, separate questions are given for visually impaired students. Only they have to attend them.**

SECTION - A

■ **Answer the questions 1 to 24 as directed. (Each question carries 1 mark.)** **[24]**

Choose the correct option from given options :

1) While cooking, if the bottom of the Vessel is getting blackened on the outside, it means that. **[1]**

(A) the Food is not cooked completely

(B) the Fuel is not burning completely

(C) the Fuel is wet

(D) the Fuel is burning completely

2) Which of the following is an olfactory indicator? [1]

(A) Methyl Orange

(B) Phenolpthalein

(C) Vanilla

(D) Turmeric

3) $1\mu A =$ _____ A. [1]

(A) 10^{-6}

(B) 10^{-3}

(C) 10^{3}

(D) 10^{6}

4) The lungs in human beings are a part of the system for [1

(A) Nutrition

(B) Transportation

(C) Excretion

(D) Respiration

5) The crystalline lens of people at old age becomes milky and cloudy. This condition is called _____ [1]

(A) Cataract

(B) Myopia

(C) Hypermetropia

(D) Presbyopia

6) No matter how Far you stand From a mirror, your image appears erect. The mirror is likely to be [1]

(A) Only plane

(B) Only concave

(C) Only convex

(D) Either plane or convex

■ **Fill in the blanks with correct answer.**

7) The earth's crust has only _____% carbon in the Form of minerals.[1]

(0.02, 0.5, 1)

8) The SI unit of electric potential difference is named after the Scientist _____. [1]

(Andre - Marie Ampere, Alessandro Volta, Georg Simon Ohm)

9) In anaerobic respiration by our muscle cells, the pyruvate is converted into _____. [1]

(Ethanol, Acetic acid, Lactic acid)

10) _____ animal can change sex . [1]

(Lizard, Snail, Frog)

11) The lens formula is _____. [1]

$\left(\frac{1}{v}-\frac{1}{u}=\frac{1}{f}, \frac{1}{u}-\frac{1}{v}=\frac{1}{f}, \frac{1}{v}+\frac{1}{u}=\frac{1}{f}\right)$

12) _____ is the Chemical Formula of Cinnabar. [1]

(HgS, ZnS, Cu_2S)

■ **State whether the following statements are true or false.**

13) Solder is an alloy of lead and tin. [1]

14) A child who inherits a 'Y' chromosome from the Father will be a girl. [1]

15) The twinkling of a star is due to atmospheric refraction of starlight. [1]

16) The concentration of hydronium ions (H_3O^+) increased when a solution of an acid is diluted. [1]

■ **Answer the following questions as directed :**

17) Iodine is necessary For the Synthesis of which hormone in human body? **[1]**

18) If a "trait A" exists in 10% of a population of an asexually, reproducing species and a "trait B" exists in 60% of the same population, which trait is likely to have arisen earlier? **[1]**

19) In the dispersion of white light through a prism, Which coloured light bends the least? **[1]**

20) Define : Electric current. **[1]**

■ **Match the following :**

A	B	
21) Cytokinin	a) Help in the growth of stem	**[1]**
22) Gibberellins	b) Wilting of leaves	**[1]**
	c) Promote cell division	

A	B	
23) The organisms which prepared their own Food	a) Herbivores	**[1]**
24) The organisms which feed on plants	b) Producers	**[1]**
	c) Carnivores	

SECTION - B

Answer any Nine (9) questions from the Q.No. 25 to 37 in word limit of 40 to 50 words approximately as directed : (Each question carries 2 marks) [18]

25) A shiny brown coloured element 'X' on heating in air becomes black in colour. Name the element 'X' and the black coloured compound Formed. [2]

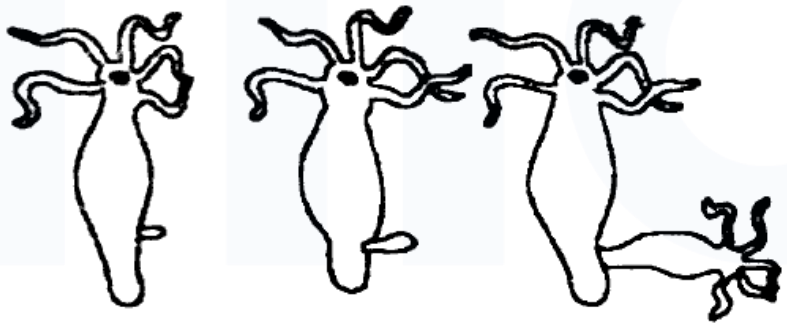
26) Give reason : Platinum, Gold and Silver are used to make jewellery. [2]

27) Draw neat and labelled diagram showing nutrition in Amoeba. [2]

(Only For visually impaired students)

27) Explain nutrition in Amoeba. [2

28) Observe the following diagram. [2



a) Name the type of reproduction

b) Name the organism

(Only for visually impaired students)

28) Name any Four modes of reproduction used by single organisms.

29) What is called an unisexual Flower? Write its examples.

30) Why does the Sky appear dark instead of blue to an astronaut?

31) A current of 0.5 A is drawn by a Filament of an electric bulb for 20 minutes. Find the amount of electric charge that Flows through the circuit [2]

32)

Material	Resistivity (Ωm)
Silver	1.60×10^{-8}
Copper	1.62×10^{-8}
Iron	10.0×10^{-8}
Mercury	94.0×10^{-8}
Manganese	1.84×10^{-6}

Use the data from the above table to answer the Following questions. [2]

a) Which among iron and mercury is a better conductor?

b) Which material is the best conductor?

33) Explain Solenoid. [2]

34) How can you help in reducing the problem of waste disposal? Give any two methods. [2]

35) Classify the following ecosystems into natural ecosystem and artificial ecosystems. [2]

Forest, garden, aquarium, Sea

36) State the organs of human respiratory system. [2]

37) Explain Fleming's left-hand rule. [2]

SECTION - C

Answer any Six (6) questions from the Q.No. 38 to 46 in word limit of 60 to 80 words approximately as directed : (Each question carries 3 marks) [18]

38) What is combination reaction? Explain with two examples. **[3]**

39) The electronic configuration of two elements X and Y are as follows : **[3]**

X = 2, 8, 1

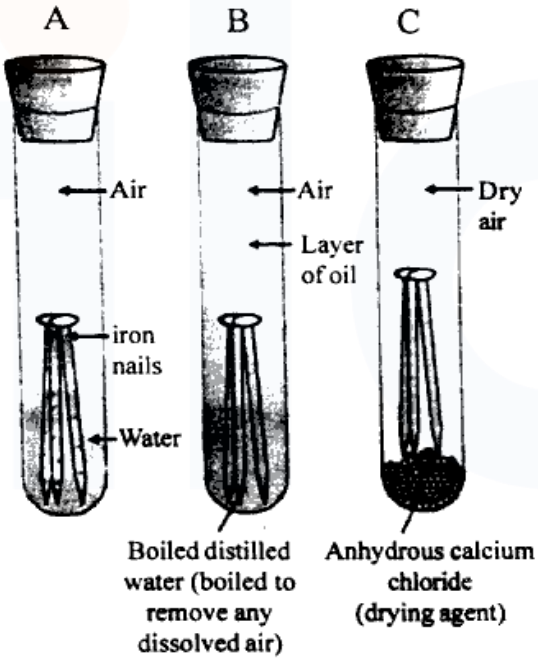
Y = 2, 8, 7

a) Identify the metal and write its name

b) Identify the nonmetal and Write its name.

c) Which ionic compound is Formed by X and Y?

40) Observe the test tubes A, B and C from the given Figure and answer the Following questions. **[3]**



a) In which test tube, the colour of iron nail will change?

b) Name the Chemical reaction associated with it.

c) Write the essential conditions required for the above chemical reaction.

[Only for visually impaired students]

40) Give an example of a metal which

a) Melt if you keep it on your palm

b) Can be easily cut with knife

c) Are found in nature in the free state

41) Draw neat and labelled diagram of neuron. Write the Function of dendrite. [3]

[Only for visually impaired students]

41) Write a short note on neuron.

42) What are the changes seen in girls at the time of puberty? [3]

43) Differentiate between Male reproductive System and Female reproductive system. [3]

44) Name the type of mirror used in the following situations - [3]
   a) Headlights of a car
   b) Side/rear-view mirror of a vehicle
   c) Solar Furnace

45) Draw a ray diagram showing the image formation by a convex lens when an object is placed between F_1 and $2F_1$ of the lens. Write the position, nature and size of image. [3]

[Only for visually impaired students]

45) Explain the sign convention for refraction by spherical mirror.

46) The potential difference between the terminals of an electric heater is 60 V When it draws a current of 4 A from the Source. What current will the heater draw if the potential difference is increased to 120 V? **[3]**

SECTION - D

Answer any Five (5) questions from the Q.No. 47 to 54 in word limit of 90 to 120 words approximately as directed : (Each question carries 4 marks) **[20]**

47) Five solutions A, B, C, D and E when tested with universal indicator showed pH as 4, 1, 11, 7 and 9 respectively Which solution is _____ **[4]**
   a) neutral
   b) Strongly alkaline?
   c) Strongly acidic?
   - Arrange the pH in increasing order of hydrogen-ion concentration.

48) How is plaster of Paris formed? Write an equation to show the reaction between plaster of Paris and Water? Write uses of plaster of Paris. [4]

49) a) Differentiate between soap and detergent.
b) Write the names and formula of Functional groups for the following compounds -
Propanol, Propanone
[4]

50) a) Write a Short note on Lymph.
b) What are the components of the transport system in highly organised plants? Write their functions also.
[4]

51) a) What are the differences between autotrophic nutrition and heterotrophic nutrition?
b) Draw neat and labelled structure of a nephron.
[4]

[Only for visually impaired students]

51) b) State the organs of excretory system in human being.

52) Explain near sightedness (Myopia) and its correction with the help of diagram. [4]

[Only for visually impaired students]

52) Explain the differences between Myopia and Hypermetropia.

53) a) List the properties of magnetic field lines.
b) When does an electric short circuit occurs?
[4]

54) a) Write the Full forms For : CFC, UNEP.
b) What is the role of decomposers in the ecosystem?
[4]