

2026 ರ ರಾಜ್ಯ ಮಟ್ಟದ ಎಸ್.ಎಸ್.ಎಲ್.ಸಿ. ಪೂರ್ವಸಿದ್ಧತಾ ಪರೀಕ್ಷೆ - 3
STATE LEVEL SSLC PREPARATORY EXAMINATION-3, 2026

ವಿಷಯ : ವಿಜ್ಞಾನ

Subject : SCIENCE

(ಭೌತ ವಿಜ್ಞಾನ, ರಸಾಯನ ವಿಜ್ಞಾನ ಮತ್ತು ಜೀವ ವಿಜ್ಞಾನ / Physics, Chemistry & Biology)

(ಇಂಗ್ಲಿಷ್ ಮಾಧ್ಯಮ / English Medium)

ವಿಷಯ ಸಂಕೇತ : 83-E

Subject Code : 83-E

ದಿನಾಂಕ : 27. 02. 2026]

[Date : 27. 02. 2026

ಸಮಯ : ಬೆಳಿಗ್ಗೆ 10-00 ರಿಂದ ಮಧ್ಯಾಹ್ನ 1-15 ರವರೆಗೆ]

[Time : 10-00 A.M. to 1-15 P.M.

ಗರಿಷ್ಠ ಅಂಕಗಳು : 80]

[Max. Marks : 80

General Instructions to the Candidate :

1. There are *three* parts in the question paper :
Part A : Physics, Part B : Chemistry, Part C : Biology.
2. This question paper consists of 38 questions.
3. Follow the instructions given against the questions.
4. Figures in the right hand margin indicate maximum marks for the questions.
5. The maximum time to answer the paper is given at the top of the question paper.
It includes 15 minutes for reading the question paper.

PART - A

(PHYSICS)

- I. Four alternatives are given for each of the following questions / incomplete statements. Choose the correct alternative and write the complete answer along with its letter of alphabet.** **2 × 1 = 2**

1. The instrument used to measure potential difference and its mode of connection in an electric circuit among the following is
 - (A) Ammeter, in series connection
 - (B) Voltmeter, in series connection
 - (C) Voltmeter, in parallel connection
 - (D) Ammeter, in parallel connection

83-E

2. Observe the following table :

<i>Lens</i>	<i>A</i>	<i>B</i>
Magnification	-3	$+\frac{1}{3}$

The correct conclusion related to the given lenses is

- (A) *A* ; concave lens and *B* ; convex lens
- (B) *A* ; convex lens and *B* ; concave lens
- (C) Both are convex lenses
- (D) Both are concave lenses

II. Answer the following questions :

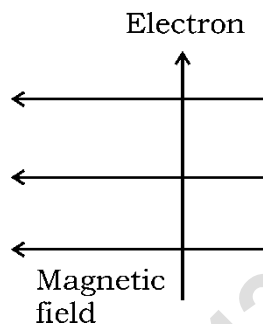
2 × 1 = 2

- 3. State the right hand thumb rule.
- 4. Draw the symbol diagram of 'Variable resistance (Rheostat)' used in an electric circuit :

III. Answer the following questions :

3 × 2 = 6

- 5. List the factors on which the resistance of a conductor depends.
- 6. Define the following :
 - i) Tyndall effect
 - ii) Dispersion of light.
- 7. Observe the given schematic diagram. What is the direction of force acting on the electron ? Justify your conclusion.



IV. Answer the following questions :

3 × 3 = 9

- 8. What is Myopia ? Mention the causes and remedy for this defect.

OR

Stars twinkle but planets do not twinkle. Why ?

9. How soft iron rod can be converted into an electromagnet using a solenoid ? How can the magnetic field of this electromagnet be increased ?

OR

Explain an activity for drawing the field lines around a bar magnet using a compass needle.

10. Draw the ray diagram that shows the image formed when an object is kept between $2F_1$ and F_1 of a convex lens. Mention the size and position of the image.

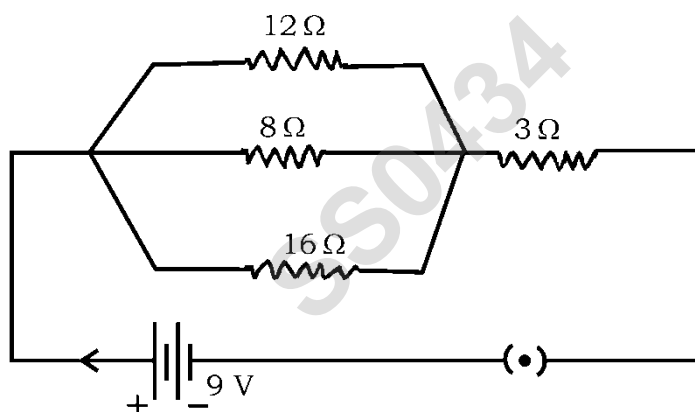
V. Answer the following questions :

2 × 4 = 8

11. a) The refractive indices of water and ice respectively are 1.33 and 1.31. In which of these two medium the light travels faster ? Why ?
- b) Explain why the emergent ray is parallel to the incident ray when light refracts through a rectangular glass slab.

OR

- a) A pencil is partially immersed in water. Then the pencil appears to be bent. Explain this phenomenon.
- b) Write any two differences between spherical mirror and spherical lens.
12. Observe the circuit given below. Find the total resistance, total current and power in the circuit.

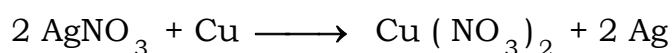
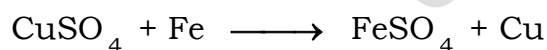


PART – B

(CHEMISTRY)

VI. Four alternatives are given for each of the following questions / incomplete statements. Choose the correct alternative and write the complete answer along with its letter of alphabet. **3 × 1 = 3**

13. A compound that reacts with an acid and a base to produce salt and water is
- (A) Aluminium oxide
 - (B) Copper oxide
 - (C) Iron oxide
 - (D) Sodium oxide
14. Compound that forms by the reaction between carboxylic acid and alcohol is
- (A) an aldehyde
 - (B) a ketone
 - (C) a haloalkane
 - (D) an ester
15. Observe the following equations and identify the correct statement with respect to these equations :

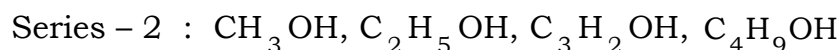
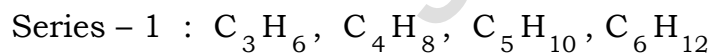


- (A) Copper is more reactive than iron and silver
- (B) Iron is more reactive than copper and silver
- (C) Copper is more reactive than silver but less reactive than iron
- (D) Silver is more reactive than copper and iron

VII. Answer the following questions :

3 × 1 = 3

16. What is rancidity ?
17. Write the chemical formula of baking soda.
18. Identify the homologous series among the following.



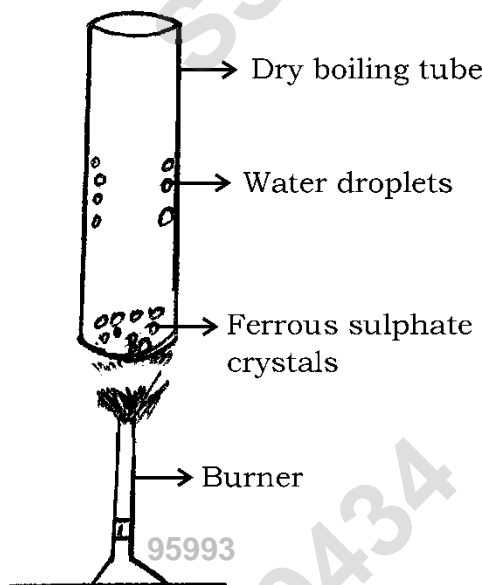
VIII. Answer the following questions :**3 × 2 = 6**

19. What is catenation ? Name the simplest hydrocarbon.
20. How is pure mercury obtained from cinnabar ?

OR

Why fire does not catch up when calcium reacts with water ?

21. Analyse the activity depicted in the figure given below. In this activity, when ferrous sulphate crystals are heated does the colour and crystalline nature of it remain same or not ? Support your answer with reason.

**IX. Answer the following questions :****3 × 3 = 9**

22. Translate the following word equations into chemical equations :

- i) Carbon + Oxygen \longrightarrow Carbon dioxide
- ii) Zinc carbonate \longrightarrow Zinc oxide + Carbon dioxide
- iii) Calcium hydroxide + Carbon dioxide \longrightarrow
Calcium carbonate + Water

OR

Chemical reactions are to be balanced. Why ? Which are the observations that help us to determine that chemical reaction has taken place ?

23. Draw the diagram of the arrangement of the apparatus used to show the action of steam on metal. Label the following parts.

- i) Delivery tube
- ii) Metal sample.

24. a) By using distilled water and concentrated acid, how do you decrease the concentration of the acid ? Explain.
- b) Doctors suggest to take milk of magnesia at the time of indigestion. Why ?

X. Answer the following questions :**1 × 4 = 4**

25. a) Carbon atoms neither form C^{4-} anion nor form C^{4+} cation. Explain.
 b) Write the structural formula of 'Butyne' and 'Cyclohexane'.

OR

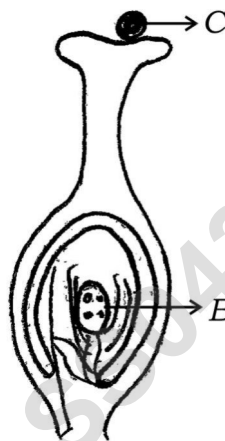
- a) Explain the cleansing action of soap.
 b) Write the differences between saturated and unsaturated carbon compounds.

PART - C**(BIOLOGY)**

XI. Four alternatives are given for each of the following questions / incomplete statements. Choose the correct alternative and write the complete answer along with its letter of alphabet.

3 × 1 = 3

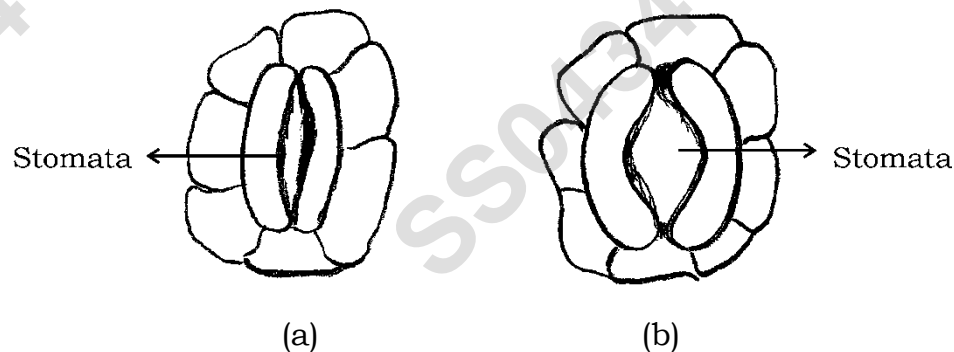
26. The blood vessel that carries oxygenated blood from the heart is
 (A) Pulmonary vein
 (B) Superior venacava
 (C) Aorta
 (D) Pulmonary artery
27. The group of organisms that reproduce by fission only, is
 (A) Amoeba, Hydra, Spirogyra
 (B) Leishmania, Amoeba, Yeast
 (C) Amoeba, Plasmodium, Planaria
 (D) Plasmodium, Amoeba, Leishmania
28. Observe the structure given in the following figure. The type of tropic movement that helps the movement of 'C' towards 'B' here is,



- (A) Phototropism
 (B) Chemotropism
 (C) Geotropism
 (D) Hydrotropism

XII. Answer the following questions :**3 × 1 = 3**

29. What is heredity ?
30. Observe the following figures. Which figure represents low rate of gaseous exchange ? Why ?



31. Observe the processes depicted in the given figures. Among the progenies, which of the process (i) causes variations ? (ii) causes similarities ?

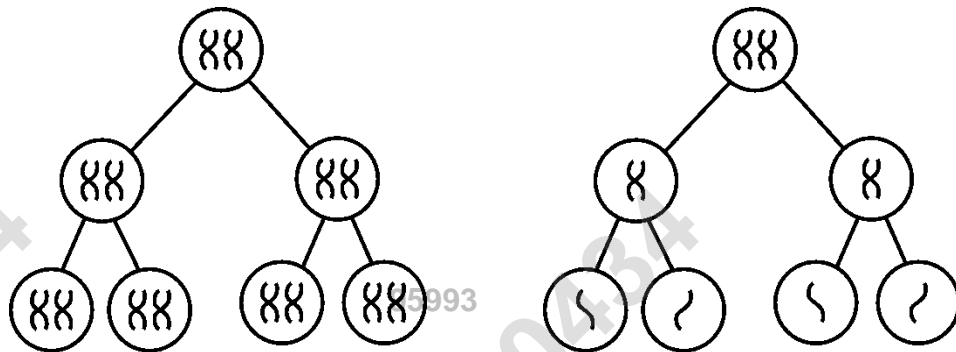


Figure - 1

Figure - 2

XIII. Answer the following questions :**2 × 2 = 4**

32. a) What is reflex arc ?
- b) Which hormones are responsible for sexual maturation in human beings ?

OR

- a) What is the function of neuron (nerve cell) ?
- b) Which hormones are responsible for the growth of stem in plants and wilting of leaves ?
33. Draw the diagram showing the structure of nephron.

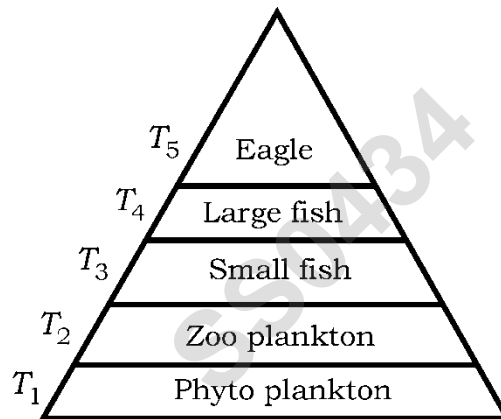
XIV. Answer the following questions :**3 × 3 = 9**

34. Tall pea plant (TT) is hybridised with a short pea plant (tt). Express the results obtained in the F_2 generation with the help of checker board and write the ratio of the types of plants obtained.

OR

- a) How is the sex of a child determined in human beings ? Explain.
- b) Write the difference between dominant and recessive hereditary traits.

35. Observe the following picture of trophic levels and answer the questions given below :



- Organisms of which trophic level have more concentration of harmful chemicals ? Why ?
 - Zoo planktons have more energy than the large fish. How ?
36. Draw the diagram showing the structure of human brain. Label the following parts :
- Pons
 - Cerebrum.

XV. Answer the following questions :

1 × 4 = 4

37. a) Name the transporting tissues in plants. Write their function.
 b) Write any four methods used by the plants to eliminate waste materials.

OR

- Name the following :
 - The site of complete digestion of food in human digestive system
 - The organ that secretes bile juice.
- What is anaerobic respiration ? Write the products of this respiration.

XVI. Answer the following questions :

1 × 5 = 5

38. a) How does an egg in a female develop into a fetus in the uterus ? How does embryo get nourishment in the mother's womb ? Explain.
 b) Write the function of testes in human male reproductive system.

OR

- Write any four advantages of vegetative propagation.
- What is pollination ? What are the changes that occur in a flower after fertilisation ?