



GRADE 10

SCIENCE

School Level Examination (SLE) 2025

SUBJECT CODE

3

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Total Questions: 50

Total Marks: 50

Time: 1 Hour

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED TO DO SO

- Carefully fill in your **Name, Class, Roll Number**, and other required details on the **OMR Answer Sheet**.
- Use **only an HB pencil** to fill the OMR Answer Sheet.
- All questions are **compulsory** and carry **one mark** each.
- Only **OMR Answer Sheets** will be evaluated.
- There is **no negative marking** for incorrect answers.
- You may use the **last page** of the question paper for **rough work**.
- **Digital devices** like calculators, smart watches, or mobile phones are **not allowed**.
- After the exam, **submit** both the **OMR Answer Sheet** and the **Question Paper** to the invigilator.

This question paper contains a total of 50 questions, divided into three sections: A, B, and C.

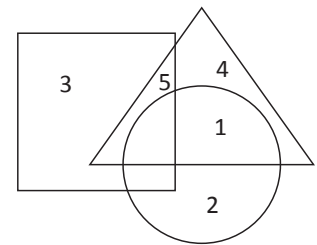
Section A (Logical Reasoning)

1. Choose one word that cannot be formed from the word HATCHET.

(A) CATCH (B) HATCH (C) CHEAT (D) CHAT

2. In the given figure:

- Triangle shows 'Females'.
- Square shows 'Teachers'.
- Circle shows 'Doctors'.



Which number represents 'male doctors'?

(A) 2 (B) 1 (C) 4 (D) 5

3. Look at this series 7, 10, 8, 11, 9, 12 What number should come next?

(A) 7 (B) 10 (C) 12 (D) 13

4. If A is the son of X, X and Y are brothers, Z is the mother of Y, B is the daughter of Z, then which of the following statements is correct?

(A) X and B are cousins. (B) B is the maternal uncle of A.
(C) Z is mother of X and B. (D) X, Y and B are brothers.

5. If P denotes $\div$, Q denotes $\times$, R denotes $+$ and S denotes $-$, then

$18 Q 12 P 4 R 5 S 6 = \underline{\hspace{1cm}} ? \underline{\hspace{1cm}}$.

(A) 36 (B) 53 (C) 59 (D) 65

6. If gloves are called pads, pads are called stumps, stumps are called bails, bails are called helmet, what flies off first when stumps are dislodged by the wicketkeeper?

(A) Helmet (B) Bails (C) Wickets (D) Pads

7. Choose the figure which is different.

(A) (B) (C) (D)

8. If 8978 stands for HIGH, then 453945 stands for _____.

(A) DECIDE (B) DECODE (C) CODEED (D) CODING

9. In a queue of children, Kashish is fifth from the left and Mona is sixth from the right. When they interchange their places among themselves, Kashish becomes thirteenth from the left. Then, what will be Mona's position from the right?

(A) 4th (B) 8th (C) 14th (D) 15th

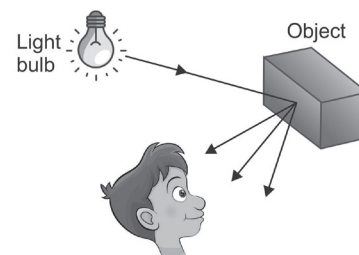
10. Three among the four are alike in the given set. Which one does not belong to that set?

$Q * 7, R \Sigma 3, 6 @ M, P \# 8$

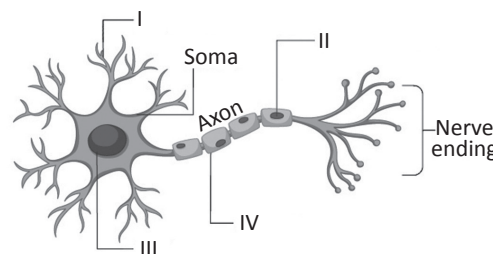
(A) $Q * 7$ (B) $R \Sigma 3$ (C) $6 @ M$ (D) $P \# 8$

Section B (Subject Specific)

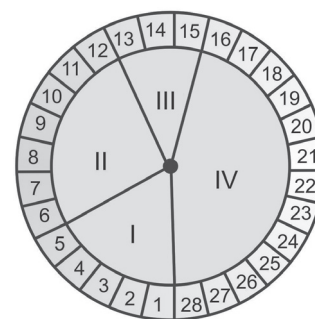
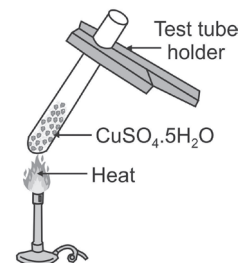
11. The following pair of substances are available in the laboratory:
- | | |
|------------------------------------|---|
| I. Zinc and dil. HCl | II. Zn and dil. NaOH |
| III. NaHCO_3 and dil. HCl | IV. Na_2CO_3 with dil. NaOH |
- Which of these can be used to produce a colourless and odourless gas that gives a 'pop' sound on burning?
- (A) I Only (B) II Only (C) I and II Only (D) III and IV Only
12. Which of the following statements are incorrect?
- I. Light is a form of energy.
 - II. Light travels in a straight line.
 - III. Reflection occurs when light bounces off the surface of objects.
 - IV. Reflection occurs when light bends as it passes from one medium to another.
- (A) I and II only (B) II and III only
(C) I, II and III only (D) IV only
13. Why does soap not form lather in hard water?
- (A) Soap is insoluble in water.
(B) Soap reacts with calcium/magnesium to form scum.
(C) Soap is acidic.
(D) Soap breaks down in hard water.
14. A hydrocarbon 'X' (molar mass 28) and having 86% carbon reacts with water in the presence of sulphuric acid to form 'Y' with specific smell and burning taste, which liberates hydrogen with sodium metal. 'X' and 'Y', respectively are
- (A) $\text{C}_2\text{H}_5\text{OH}$, C_2H_2 (B) C_2H_4 , $\text{C}_2\text{H}_5\text{OH}$ (C) C_2H_6 , $\text{C}_2\text{H}_5\text{OH}$ (D) C_2H_2 , $\text{C}_2\text{H}_5\text{OH}$
15. Which among the following is not a part of the male reproductive system?
- (A) Testis (B) Vas deferens (C) Urethra (D) Fallopian tube
16. Silver ornaments turn black on prolonged exposure to air. This is due to the formation of _____ and it can be removed by _____.
- (A) Ag_2O , H_2SO_4 (B) Ag_3N , H_2SO_4 (C) Ag_2S , H_2SO_4 (D) Ag_2S and Ag_2O , H_2SO_4
17. The direction of force on a current-carrying conductor placed in a magnetic field is determined by _____.
- (A) Fleming's left hand rule (B) Fleming's right hand rule
(C) Right hand thumb rule (D) Faraday's law of electromagnetic induction



18. Observe the given diagram of neuron (nerve cell) and select the incorrect option.
- (A) Part I is the longest fibre on the cell body of a neuron.
(B) Part II support cells of peripheral neurons.
(C) Part III and IV are nucleus and myelin sheath respectively.
(D) All of these



19. In which of the following medium will a ray of light bend most for the same angle of incidence?
 (A) Kerosene (B) Water (C) Mustard oil (D) Glycerine
20. Colour blindness may be caused by _____.
 I. Improper functioning of cone cells
 II. Absence of some cone cells in the retina
 III. Genetic disorder
 (A) I and II only (B) II and III only (C) I and III only (D) I, II and III
21. The reactions of water with quicklime and ammonia with hydrogen chloride are examples of _____.
 (A) Combination reactions (B) Decomposition reactions
 (C) Displacement reactions (D) None of these
22. What is the minimum resistance which we will get by using five resistors of $\frac{1}{5} \Omega$?
 (A) 5Ω (B) $\frac{1}{25} \Omega$ (C) 1Ω (D) 25Ω
23. Which of the following are STDs (Sexually Transmitted Diseases)?
 I. Gonorrhoea II. Syphilis
 III. AIDS IV. Chikungunya
 (A) I and II only (B) II and III only (C) I, II and III only (D) IV only
24. Identify the correct observation.
 (A) Blue colour changes to white and finally black solid is left as residue and pungent smelling gas comes out.
 (B) Blue colour changes to red.
 (C) Blue colour remains as it is.
 (D) Blue colour changes to green and finally reddish-brown solid is left as residue.
25. Mary has a typical menstrual cycle of 28 days. Identify the correct option if Mary's last menstrual flow started on 1st November.
- (A) (I) Menstrual discharge, (II) Ovulation, (III) Uterine thin lining repaired, (IV) Thick uterine lining
 (B) (I) Menstrual discharge, (II) Ovulation, (III) Thick uterine lining, (IV) Thin uterine lining repaired
 (C) (I) Menstrual discharge, (II) Ovulation, (III) Thin uterine lining repaired, (IV) Thick uterine lining
 (D) (I) Menstrual discharge, (II) Uterine lining remains thin, (III) Ovulation, (IV) Uterine lining becomes thick
26. From the following select the abiotic factors.
- I. Sunlight II. Temperature
 III. Autotroph IV. Decomposer
 V. Soil VI. pH level
 (A) I and II only (B) II and V only
 (C) V and VI only (D) I, II, V and VI only



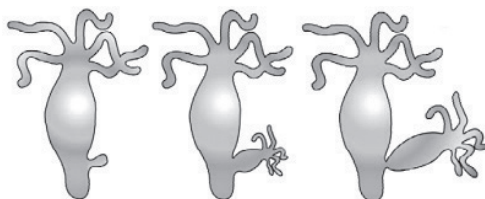
27. Which of the following is true about exothermic reactions?
- They require large amount of energy to break bonds in the reactants than energy released during product formation.
 - They absorb energy from the surroundings.
 - They result in a net loss of mass.
 - They release large amount of energy during product formation than energy required to break the bonds.
28. Which of the following statements are correct?
- Amylase converts starch to maltose.
 - Maltose gets converted to glucose by maltase.
 - Digestion of proteins takes place in acidic medium by protease.
 - Lipase converts fats into fatty acids and glycerol.
- Only I and II
 - Only II and III
 - Only I and IV
 - I, II, III and IV
29. An electric bulb rated 60 W is connected to a 120 V battery. The current through the bulb is
- 0.5 A
 - 0.05 A
 - 2 A
 - 0.2 A
30. The reaction between a fat/oil and a strong base is called
- Saponification
 - Hydrogenation
 - Esterification
 - Polymerisation.
31. When an object is placed between F and 2F of a convex lens, the image will be formed
- At F
 - Beyond 2F
 - At 2F
 - Between O and F.
32. Which of the following is an example of genetic variation?
- Seema is good hockey player but Reema is not.
 - Reema is older than Seema.
 - Reema is non-vegetarian, but Seema is a vegetarian.
 - Seema and Reema have different hair colours.
33. In humans, the gene for free earlobes (F) is dominant over attached earlobes (f). If both parents are heterozygous (Ff), what are the possible earlobe types in the children?
- Free earlobes
 - Attached earlobes
 - Half-attached earlobes
 - Folded earlobes
- (i) and (ii)
 - (ii) and (iii)
 - (i) and (iv)
 - (iii) and (iv)
34. Why does the Sun appear reddish at sunrise and sunset?
- Because it is closer to the Earth.
 - Due to the absorption of red light by the atmosphere.
 - Because most of the blue light gets scattered away whereas red light scatters the least.
 - Due to reflection from oceans.
35. Read the following and select the correct option.
- Assertion (A):** Non-metals tend to have lower melting points as compared to metals.
- Reason (R):** Non-metals have weaker forces of attraction between the particles.
- Both A and R are correct and R is correct explanation of A.
 - Both A and R are correct but R is incorrect explanation of A.
 - A is correct but R is incorrect.
 - Both A and R are incorrect.

Instruction: Q. 36 to 40 are two-key based questions having four options A, B, C and D out of which TWO are correct.

36. Which of the following processes takes place in the human stomach?
(A) Beginning of protein digestion (B) Absorption of digested food
(C) Secretion of hydrochloric acid (D) Completion of digestion of carbohydrates
37. Which of the following are unsaturated hydrocarbons?
(A) Chloropropane (B) Propene
(C) Ethyne (D) Ethanol
38. Which of the following occurs, when light travels from air into water?
(A) The light bends towards the normal. (B) The light bends away from the normal.
(C) The speed of light decreases. (D) The wavelength of light increases.
39. Which two features are true for a person suffering from cataract?
(A) Image is formed in front of the retina. (B) Clouding of the eye lens occurs.
(C) Partial or complete loss of vision. (D) It can be corrected using spectacles.
40. Which statements about rancidity are correct?
(A) It is caused by the oxidation of fats and oils. (B) It improves the taste of food.
(C) It can be slow down by refrigeration. (D) It is a displacement reaction.

Section C (Competency Enhancement)

41. The consequences of global warming may:
I. Increase the average temperature of earth
II. Cause melting of Himalayan Glaciers
III. Increase biochemical oxygen demand
IV. Cause eutrophication
(A) I and II (B) I and III
(C) II and III (D) III and IV
42. Name the type of reproduction represented in the given diagram and advantage of this type of reproduction. Also identify it.



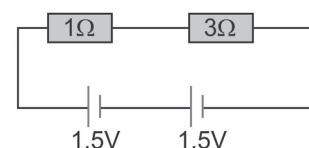
- (A) Asexual reproduction by budding, rapid multiplication, *Hydra*
(B) Sexual reproduction, slow multiplication, *Hydra*
(C) Asexual reproduction, different individual, *Amoeba*
(D) Sexual reproduction, rapid multiplication, *Amoeba*

43. Of the following, which is the most impossible result in any of the generation of Mendel's experiment?
- (A) 3 tall and 1 short plant (B) 24 tall and 8 short plants
(C) 8 tall and 0 short plants (D) 4 tall plants and 1 medium-height plant

44. Which of the following salt solutions is most acidic?
- (A) Sodium acetate (B) Ammonium chloride
(C) Sodium chloride (D) Potassium sulphate

45. Total resistance, total current and amount of charge passing through the battery in 10 min for the given circuit diagram will be

- (A) 4Ω , 1A, 950C (B) 4Ω , 0.75A, 95C
(C) 4Ω , 0.75A, 450C (D) 2Ω , 0.75A, 450C



46. A person can see nearby objects clearly but cannot see distant objects distinctly. This defect is
- (A) Hypermetropia, corrected by concave lens (B) Myopia, corrected by concave lens
(C) Hypermetropia, corrected by convex lens (D) Myopia, corrected by convex lens.
47. During the extraction of a metal, a student notices that carbon is used to reduce metal oxide. What type of metal is being extracted?
- (A) Metal of high reactivity (B) Metal of low reactivity
(C) Metal of medium reactivity (D) Non-metal
48. The colour of Universal indicator and Phenolphthalein in each of the four solutions (I-IV) are given in the table. Which solution is likely to have pH 13–14?

Solution	Colour of Universal indicator	Colour of Phenolphthalein
I	Blue	Pink
II	Green	Colourless
III	Red	Colourless
IV	Violet	Pink

- (A) III (B) I (C) II (D) IV

49. A person accidentally touches a hot iron rod and immediately withdraws his hand. Which of the following correctly represents the sequence of events in the reflex arc involved in this response?
- (A) Effector → Spinal cord → Sensory neuron → Receptor
(B) Spinal cord → Receptor → Sensory neuron → Motor neuron
(C) Receptor → Sensory neuron → Spinal cord → Motor neuron → Effector
(D) Receptor → Motor neuron → Spinal cord → Sensory neuron → Effector
50. The primary function of the retina in the human eye is
- (A) To control the amount of light entering the eye
(B) To regulate the shape of the eye lens
(C) To convert light into electrical signals for the brain
(D) To focus light on the pupil.



SPACE FOR ROUGH WORK