



ORANGE GLOBAL OLYMPIAD

SCIENCE

Grade 7

National Level Examination
NLE 2025

Subject Code:

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Total Questions: 40

Total Marks: 40

Time: 1 hour

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED TO DO SO

- All questions are compulsory.
- Read the instructions on the **ANSWER SHEET** and fill in your **NAME, CLASS** and **OTHER INFORMATION**.
- To mark your choice of answer by darkening the circles in the **ANSWER SHEET**, use a **BLUE/BLACK BALL-POINT PEN** only.
- You **MUST** record your answers on the **ANSWER SHEET** only.
- There are **40 MULTIPLE CHOICE QUESTIONS**. Each question carries one mark. Use the information provided to choose the **BEST** possible answer among the four options. On your **ANSWER SHEET** darken the circle that matches your answer.
- **$\frac{1}{2}$ MARK** will be deducted for every **WRONG ANSWER**.
- Return the **ANSWER SHEET** to the invigilator at the end of the examination.
- You are **NOT** allowed to use a calculator. You may use a ruler and spare paper for rough work.



This question paper contains a total of 40 questions divided into three sections—A, B and C. Read the instructions carefully before attempting these questions.

Section A (Logical Reasoning)

1. What number should come next?

58, 52, 46, 40, 34, ?

(A) 26
(C) 30

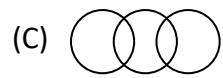
(B) 28
(D) 32

2. A man walks 5 km towards the south and then turns to the right. After walking 10 km he turns to the left and walks 5 km. Now in which direction is he from the starting place?

(A) West
(C) North-East

(B) South
(D) South-West

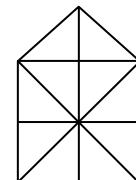
3. Choose the diagram that illustrates the relationship between 'travellers, train and flight'.



4. Find the number of triangles in the given figure.

(A) 10
(C) 21

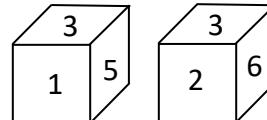
(B) 19
(D) 23



5. Two positions of a dice are shown in the given figure. Which number will appear on the face opposite to the face with the number 5?

(A) 1
(C) 6

(B) 2
(D) 4



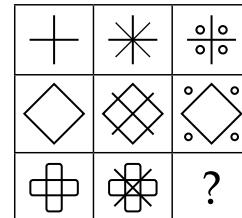
6. P, Q, R, S and T are sitting on a bench. P is sitting next to Q, R is sitting next to S, S is not sitting with T who is on the left end of the bench. R is in the second position from the right. P is to the right of Q and T. P and R are sitting together. In which position P is sitting?

(A) Between Q and T
(C) Between T and S
(B) Between Q and R
(D) Between R and T

7. Select a suitable figure from the four alternatives that would complete the figure matrix.

(A)

(B)



8. What will come in place of the question mark (?) in the given pattern?

Odometer : ? :: Thermometer : Temperature

(A) Pressure
(C) Wind speed

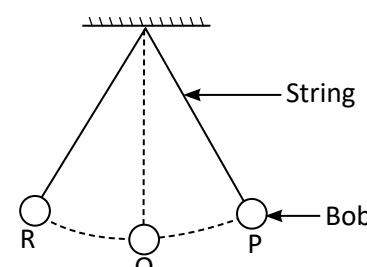
(B) Humidity
(D) Distance



Section B (Subject Specific)

9. Which of the following statements is true about insectivorous plants?

(A) They are truly autotrophs and require sunlight to perform photosynthesis.
(B) The money plant is an example of insectivorous plant.
(C) They are partially heterotrophs as they complete their nitrogen deficiency by catching insects.
(D) They derive nutrition from dead and decaying plants.

10. The given figure shows the motion of a simple pendulum. The time period of such a pendulum is the time taken for it to move from _____. 

(A) Point P to Q
(B) Point P to R
(C) Point P to R and back to Q
(D) Point P to R and back to P

11. On adding phenolphthalein indicator to a colourless solution, no change is observed. What is the nature of this solution?

(A) Basic
(C) Either acidic or neutral
(B) Either acidic or basic
(D) Either basic or neutral

12. Four students conducted an experiment to determine the end products of aerobic respiration under different conditions. They documented their observations as follows:

Student 1: Carbon dioxide, water and energy

Student 2: Ethanol, carbon dioxide and energy

Student 3: Lactic acid and energy

Student 4: Glucose and energy

Which of the following students correctly observed the end products of aerobic respiration?

(A) Student 1
(C) Student 3
(B) Student 2
(D) Student 4

13. In an experiment, a plant is placed under different light conditions: one in direct sunlight and the other in complete darkness. After 24 hours, the presence of starch was examined in both plants. Which of the following statements is most likely true?

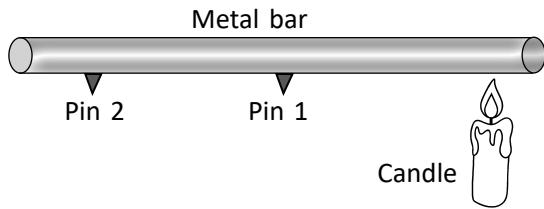
(A) Starch will be present in the leaves of both plants due to photosynthesis.
(B) Starch will be present only in the leaves of the plant kept in sunlight.
(C) No starch will be present in the leaves of either plant because both lacked sufficient light for photosynthesis.
(D) Starch will be present only in the leaves of the plant kept in darkness due to the absence of light.

14. Consider the following adaptive features of animals:

(i) Layer of fat beneath the skin
(iii) Slippery body
(ii) Long, curved and sharp claws
(iv) Thick white fur

Which of these are adaptive features found in polar bears?

(A) (iv) only
(C) (i), (ii) and (iii) only
(B) (i) and (ii) only
(D) (i), (ii) and (iv) only





22. Read the given statements carefully.

- (i) Always turn the switch in the 'ON' position when not using electrical appliances.
- (ii) Never experiment with the electric supply from mains.
- (iii) Use any wire to replace fuse wire.
- (iv) Never touch the lighted electric bulb connected to the mains.

Select the correct ones.

(A) (ii), (iii) and (iv) only	(B) (ii) and (iv) only
(C) (i) and (iii) only	(D) (i), (iii) and (iv) only

23. Sameer wrote the following names of living things on a piece of paper: grass, insects, snakes, frogs and eagles. Which of the following sequences correctly represents a food chain?

(A) Grass, insects, snakes, frogs, eagles	(B) Grass, frogs, insects, snakes, eagles
(C) Grass, frogs, snakes, eagles, insects	(D) Grass, insects, frogs, snakes, eagles

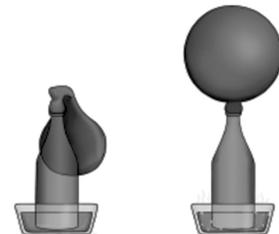
24. Stainless steel pans are usually provided with copper bottoms. The reason for this could be that _____.

- (A) Copper bottom makes the pan more durable
- (B) Such pans appear colourful
- (C) Copper is easier to clean than stainless steel
- (D) Copper is a better conductor of heat than stainless steel

25. Look at the given figure and select the correct option.

- (A) This shows air expands on cooling and contracts on heating.
- (B) This shows air expands on heating and contracts on cooling.
- (C) This shows warm air is heavier than cold air.
- (D) This shows that the behaviour of air is unaffected by temperature changes.

Cold water Hot water



26. What is the sequence of seven different colours called when white light passes through a prism?

(A) Spectrum	(B) Rainbow
(C) Dispersion	(D) Diffraction

27. A student conducted an experiment to measure the pH of various solutions, obtaining the following results:

Solution	pH
W	8.5
X	6.5
Y	7.0
Z	4.0

Based on the pH values, determine which of the following statements is true regarding their acidity or basicity.

(A) Solution W is basic.	(B) Solution X is neutral.
(C) Solution Y is acidic.	(D) Solution Z is basic.

28. Tiny pores present on the leaves that allow the exchange of gases are called _____.

(A) Stomata	(B) Chloroplasts
(C) Lichens	(D) Phloem

Instruction: Q. 29 to 33 are two-key based questions having four options A, B, C and D out of which TWO are correct.

29. Which of the following are the primary functions of the pseudopodia or false feet of Amoeba?

(A) Locomotion	(B) Capturing prey
(C) Exchange of gases	(D) Excretion



30. A sample of soil is mixed with water and allowed to settle. The clear supernatant solution turns the pH paper yellowish-orange. Which of the following would change the colour of this pH paper to greenish-blue?

(A) Lemon juice (B) Baking soda
(C) Common salt (D) An antacid

31. Read the following statements and select the correct option.

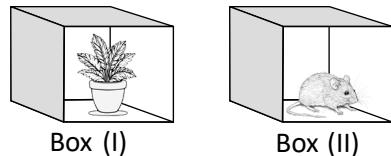
(i) Electric circuits are made by using copper wires.
(ii) Copper wires are bad conductors of electricity.
(iii) Filament of bulb is made of gold.
(iv) In electric bell, electrical energy is converted into sound energy.
(A) (i) is the correct statement. (B) (iii) is the correct statement.
(C) (ii) is the incorrect statement. (D) (iv) is the incorrect statement.

32. Ishan placed a plant in an airtight glass box (I) and a rat in another airtight glass box (II), both boxes were kept in sunlight for several hours. Afterwards, he measured the oxygen and carbon dioxide concentrations in both boxes. Which of the following observations is correct?

(A) The oxygen concentration in box (I) is higher than in box (II).
(B) The carbon dioxide concentration in box (I) is lower than in box (II).
(C) The oxygen concentration in both boxes is the same.
(D) The carbon dioxide concentration in both boxes is the same.

33. In Wastewater Treatment Plant (WWTP), following steps are set up to clean water. Which among these are incorrect?

(A) Wastewater is passed through bar screens where small microorganisms are removed.
(B) Water then goes to grit and sand removal tank. The speed of the incoming wastewater is increased for sand, grit and pebbles to settle down.
(C) Water is then allowed to settle in a large tank which is sloped towards the middle. Solids settle at the bottom and are removed with a scraper.
(D) Air is pumped into the clarified water to help aerobic bacteria to grow.



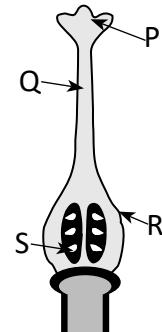
Section C (Competency Enhancement)

34. Refer to the given figure and identify the correct statement related to P, Q, R and S.

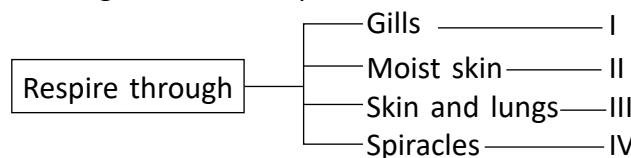
(A) P is the terminal sticky knob that receives pollen grains from other flowers.
(B) Q is the long neck-like part of male reproductive structure.
(C) R contains S that develop into seeds upon fertilisation.
(D) Both (A) and (C)

35. Arrange the stages of the silkworm's life cycle in the correct sequence and select the correct option.

(i) The silkworm wraps itself inside a cocoon.
(ii) Adult female silk moth lays its eggs.
(iii) The silkworm changes into pupa inside the cocoon which transforms into an adult moth.
(iv) The larvae called silkworms hatch out after a few days and grow in size.
(A) (i) → (iv) → (ii) → (iii) (B) (ii) → (iii) → (iv) → (i)
(C) (ii) → (iv) → (iii) → (i) (D) (ii) → (iv) → (i) → (iii)



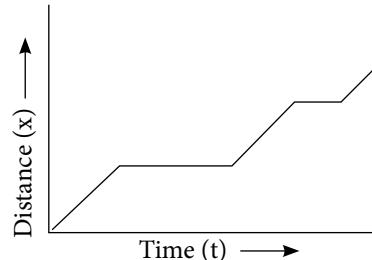
36. Study the flowchart given below which explains the respiratory structures adapted by different animals. Identify the animals by choosing the correct option.



	I	II	III	IV
(A)	Frog	Grasshopper	Pigeon	Cockroach
(B)	Fish	Earthworm	Frog	Cockroach
(C)	Fish	Snake	Spider	Earthworm
(D)	Monkey	Amoeba	Penguin	Grasshopper

37. An ant moves along a straight line. Pawan plots a distance-time graph for the ant as shown in the given figure. Identify the type of motion of the ant.

(A) Periodic motion
(B) Uniform motion
(C) Circular motion
(D) Non-uniform motion



38. Read the given statements regarding blood vessels.

'X' is a thick-walled vessel that carries oxygenated blood.
'Y' is a thin-walled vessel that carries deoxygenated blood.
'Z' is a very thin tube that connects 'X' and 'Y'.

Identify X, Y and Z.

	X	Y	Z
(A)	Artery	Vein	Capillary
(B)	Vein	Artery	Capillary
(C)	Capillary	Artery	Vein
(D)	Artery	Capillary	Vein

39. Which statement(s) describe both physical and chemical changes correctly?

	Physical change	Chemical change
Statement 1	Mostly reversible	Irreversible
Statement 2	No new substances are formed	One or more new substances are formed
Statement 3	Temporary change	Permanent change
Statement 4	Little or no absorption of energy	Involves absorption or evolution of energy

(A) Statements 1 and 4 only
(B) Statements 1 and 3 only
(C) Statement 2 only
(D) Statements 1, 2, 3 and 4

40. The adjacent diagram shows a ray of light passing through a glass prism and splitting into its seven constituent colours. P and Q are respectively _____.

(A) Violet and red
(B) Red and violet
(C) Blue and yellow
(D) None of these

