

IQNexus Science Olympiad (IQSO) – Class 6

Sample Paper

Total Questions: 30 | Total Marks: 100 | Time: 1 Hour

Student Details:

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Section: \_\_\_\_\_

Roll No.: \_\_\_\_\_

School Name: \_\_\_\_\_

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Section 1: Logical Challenger (Science-Based Puzzles & Reasoning) – 5 Questions (10 Marks)

(Each question carries 2 marks)

1. A scientist arranges 4 different liquids in a beaker, one above the other, based on their densities. Which liquid will be at the bottom?

- A) The one with the highest density
- B) The one with the lowest density
- C) The one with the highest boiling point
- D) The one with the lowest viscosity

2. Find the odd one out:

- A) Mercury
- B) Iron
- C) Gold

D) Plastic

3. If a shadow is longest in the morning and evening, and shortest at noon, what is the primary reason?

A) The moon's reflection

B) The Earth's rotation

C) The speed of wind

D) The height of the observer

4. If two magnets are placed close to each other, which of the following will happen?

A) They will always attract

B) They will always repel

C) They may attract or repel

D) They will have no effect on each other

5. If 2 liters of water are frozen into ice cubes, what will be the volume of the ice?

A) Less than 2 liters

B) Exactly 2 liters

C) More than 2 liters

D) It depends on the temperature

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Section 2: Core Science (Physics, Chemistry, Biology) – 15 Questions (45 Marks)

(Each question carries 3 marks)

6. Which of the following is a non-luminous object?

A) The Sun

B) A candle flame

C) The Moon

D) A light bulb

7. The primary function of the large intestine in the human body is to:

A) Absorb nutrients

B) Store bile

C) Absorb water

D) Break down proteins

8. A chemical change occurs when:

A) Ice melts into water

B) Water boils to steam

C) Paper is cut into pieces

D) Iron rusts

9. Which of these planets has the most moons?

A) Earth

B) Mars

C) Jupiter

D) Venus

10. Photosynthesis requires all of the following except:

A) Sunlight

B) Carbon dioxide

C) Oxygen

D) Chlorophyll

11. Which of the following is an example of kinetic energy?

A) A stretched rubber band

B) A book on a table

C) A rolling ball

D) A battery

12. The atomic number of an element represents:

- A) The number of protons in its nucleus
- B) The number of neutrons in its nucleus
- C) The sum of protons and neutrons
- D) The number of electrons in the outer shell

13. In which part of the digestive system does most nutrient absorption occur?

- A) Stomach
- B) Small intestine
- C) Large intestine
- D) Liver

14. What is the function of stomata in plants?

- A) Absorbing water
- B) Transporting food
- C) Exchanging gases
- D) Storing energy

15. Which of the following is an example of a renewable source of energy?

- A) Coal
- B) Petroleum
- C) Natural Gas
- D) Solar Energy

16. The main component of the Earth's atmosphere is:

- A) Oxygen
- B) Carbon dioxide
- C) Nitrogen
- D) Hydrogen

17. What is the SI unit of force?

- A) Joule
- B) Newton
- C) Pascal
- D) Watt

18. Which organ in the human body produces insulin?

- A) Liver
- B) Pancreas
- C) Stomach
- D) Kidney

19. What is the function of white blood cells?

- A) Transport oxygen
- B) Fight infections
- C) Carry nutrients
- D) Clot blood

20. Which of these is a synthetic fiber?

- A) Cotton
- B) Wool
- C) Nylon
- D) Silk

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Section 3: Scientific Aptitude (Application-based & Experimental Science) – 5 Questions  
(25 Marks)

(Each question carries 5 marks)

21. Which simple machine is used in a seesaw?

- A) Pulley

B) Inclined plane

C) Lever

D) Wedge

22. What happens when baking soda is mixed with vinegar?

A) A solid is formed

B) A gas is released

C) The temperature drops significantly

D) It changes color

23. A student places an iron nail in water for a week. What will she observe?

A) The nail dissolves

B) The nail gets smaller

C) The nail rusts

D) The nail turns into a liquid

24. A plant is kept in a dark room for a few days. What will happen to its leaves?

A) They will turn yellow

B) They will grow faster

C) They will become thicker

D) They will produce more oxygen

25. Which of these animals undergoes metamorphosis?

A) Dog

B) Frog

C) Elephant

D) Dolphin

(Each question carries 4 marks)

26. If a ship made of iron floats on water, but an iron nail sinks, what principle explains this?

- A) Gravity
- B) Archimedes' Principle
- C) Newton's Third Law
- D) Pascal's Law

27. Why do astronauts appear to float in space?

- A) There is no gravity in space
- B) They are constantly falling towards Earth
- C) Their suits reduce gravity
- D) Air resistance keeps them up

28. A cold bottle of water forms droplets on the outside when taken out of the fridge. This is an example of:

- A) Evaporation
- B) Condensation
- C) Sublimation
- D) Freezing

29. What would happen if there were no decomposers in an ecosystem?

- A) Plants would grow faster
- B) Dead organisms would accumulate
- C) There would be more oxygen
- D) Animals would stop breathing

30. A car's brakes convert kinetic energy into:

- A) Electrical energy
- B) Heat energy
- C) Light energy

D) Chemical energy

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Answer Key

1 – A

2 – D

3 – B

4 – C

5 – C

6 – C

7 – C

8 – D

9 – C

10 – C

11 – C

12 – A

13 – B

14 – C

15 – D

16 – C

17 – B

18 – B

19 – B

20 – C

21 – C

22 – B

23 – C

24 – A

25 – B

26 – B

27 – B

28 – B

29 – B

30 – B