

Grade
5

Grand Finale 2024-25

S-CAT Question Paper

NSA025

Return the answer sheet along with question paper to the invigilator at the end of the exam.



TOTAL MARKS
100



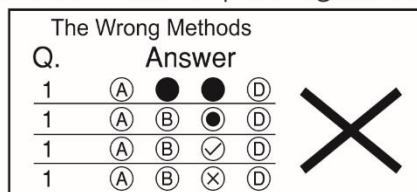
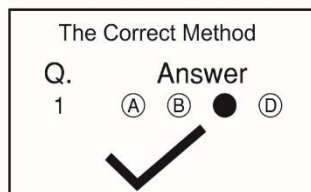
QUESTIONS
50



DURATION
60 mins

Instructions for Student:

- Read the question carefully before answering.
- Each question has 4 options (A, B, C & D).
- Choose one correct option as your answer, from the 4 options.
- Every question carries 2 marks.
- There will be an additional 0.5 Negative Marking for every wrong answer.
- On the answer sheet blacken the correct option against the corresponding question number,



- Use pencil to mark your answer.
- If you wish to change your answer, erase the previous mark completely.

1. Which of the following groups of food helps to protect against diseases?
 - a. Vegetables, Citrus fruits, and nuts
 - b. Rice, chapati, water,
 - c. Ghee, butter, oil
 - d. Fish, eggs, beans
2. Rohan planted seeds in his garden, but only some sprouted. He noticed that some of the seeds were kept in water, while others were kept in dry soil without watering. Which seeds are more likely to have germinated, and why?
 - a. The seeds in dry soil, because they received oxygen.
 - b. The seeds kept in water, because water is necessary for germination.
 - c. Both sets, because all seeds germinate naturally over time.
 - d. Neither, as seeds need soil to germinate.
3. A cube has a side length of 5 cm. Calculate its volume.
 - a. 25 cm^3
 - b. 75 cm^3
 - c. 125 cm^3
 - d. 100 cm^3
4. In which type of reproduction is only one parent involved?
 - a. Sexual reproduction
 - b. Asexual reproduction
 - c. External fertilization
 - d. Germination
5. Which statement correctly describes a renewable resource?
 - a. A resource that can be renewed naturally and is always available.
 - b. A resource that is limited in supply and cannot regenerate quickly.
 - c. A resource that comes from fossilized plants and animals.
 - d. A resource that is non-reusable and only used once.
6. If a child has bleeding gums and rough skin, what deficiency disease might he have? Which Vitamin should be taken?
 - a. Scurvy, Vitamin C
 - b. Rickets, Vitamin A
 - c. Scurvy, Vitamin B
 - d. Beri beri, Vitamin B
7. Which of the following is NOT a renewable resource?
 - a. Sunlight
 - b. Wind
 - c. Coal
 - d. Water
8. What is pollination?
 - a. The process by which seeds are spread away from the parent plant.
 - b. The transfer of pollen from the anther to the stigma of a flower.
 - c. The process of a seed developing into a new plant.
 - d. The fusion of male and female gametes to produce a zygote.

9. Observe the picture given below carefully. Which systems of the boy's body are most likely involved in performing the high jump at the Olympics?

- Skeletal system and Digestive system
- Digestive system and Excretory System
- Skeletal system and Muscular system
- Muscular system and Excretory system



10. Which layer of the atmosphere contains the ozone layer that protects Earth from harmful solar radiation?

- Troposphere
- Mesosphere
- Stratosphere
- Exosphere

11. Identify the type of joint shown in the picture:

- Hinge joint
- Ball and socket joint
- Gliding joint
- Pivot joint



12. When two liquids cannot mix and form a uniform solution, it is considered:

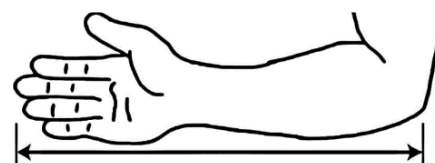
- Soluble
- Immiscible
- Miscible
- None of these.

13. _____ is a good conductor of electricity.

- Metal
- Rubber
- Plastic
- All of these

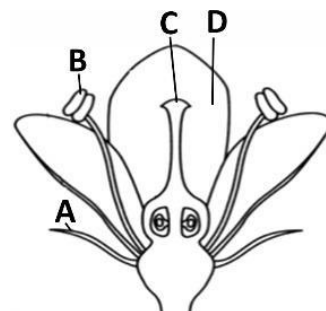
14. What type of unit is this?

- Standard
- Non-standard
- Fundamental
- Derived



15. Choose the correct option.

- A-Stamen, B- Pistil, C-Anther, D-Sepal
- A-Sepal, B-Anther, C-Stigma, D-Petal
- A-Petal, B-Anther, C-Ovule, D-Sepal
- A-Sepal, B-Stigma, C-Anther, D-Petal



16. Why are fossil fuels called as non-renewable resources?

- They are made from living things.
- They are expensive to extract.
- They take millions of years to form.
- They are not found everywhere.

- 17. In the process of sedimentation, what happens to the heavier particles in a mixture of mud and water?**
- They dissolve in water.
 - They float on the water.
 - They settle at the bottom.
 - They disappear completely.
- 18. A teacher places a piece of camphor (a solid) on a plate and heats it gently. Students observe that the camphor turns directly into vapour without becoming liquid. Which property of matter does this experiment demonstrate?**
- Evaporation
 - Condensation
 - Sublimation
 - Freezing
- 19. A small metal coin sinks when placed in a glass of water, while a cork floats on the surface. What property of matter does this experiment illustrate?**
- All solids float on water.
 - Density affects an object's ability to float.
 - All objects sink in water unless they are hollow.
 - Objects only float if they are lighter than air.
- 20. A field has a length of 4500 cm. Convert this length to meters.**
- 4.5 meters
 - 45 meters
 - 450 meters
 - 0.45 meters
- 21. Which of these is the standard unit to measure energy?**
- Newton
 - Joules
 - Meter
 - None of these
- 22. A study shows that after cutting down trees on a large scale in a hilly area, the average temperature of the area increased by 2 degrees Celsius. What can be inferred from this data?**
- Deforestation reduces the amount of oxygen in the air.
 - Deforestation helps in climate regulation.
 - Cutting down trees causes a rise in average temperature.
 - Trees cause the temperature to increase in hilly areas.
- 23. Which of the following correctly defines ligaments?**
- Tissues connecting muscles to bones
 - Tissues joining two bones together
 - Tissues that protect the outer layer of bones
 - Tissues that attach the skin to the muscles
- 24. Which of these is NOT a domestic use of water?**
- Cleaning
 - Cooking
 - Gardening
 - Irrigation

25. Which principle explains why objects less dense than water float?

- a. Surface tension
- b. Adhesion
- c. Buoyancy
- d. Cohesion

26. Is sound able to travel in a vacuum?

- a. Yes
- b. No
- c. May be
- d. Can't be determined

27. What can we calculate if we know the time taken and the distance covered?

- a. Area
- b. Volume
- c. Speed
- d. Density

28. Which of these things converts light energy to electrical energy?

- a. Windmills
- b. Solar Panels
- c. Turbines
- d. Biogas plant

29. Ritu saw these spiny seeds near her school.

How would the dispersal of these seeds take place?

- a. Through wind
- b. Through water
- c. Through animals
- d. Through bird droppings



30. Which object would form a dark shadow when placed under a light source?

- a. Clear plastic sheet
- b. Frosted glass
- c. Wooden block
- d. Thin fabric

31. During a solar eclipse, the Moon positions itself between the Earth and the Sun.

Based on this information, what can be inferred about the shadow cast on Earth?

- a. It covers the entire Earth.
- b. It only covers the area directly in the path of the eclipse.
- c. It results in a lunar eclipse.
- d. It increases daylight.

32. Which of these is the most likely outcome of excessive burning of fossil fuels?

- a. Release of excessive water in the atmosphere leading to floods
- b. Release of excessive carbon dioxide in the atmosphere leading to global warming
- c. Release of excessive oxygen in the atmosphere resulting in cleaner air
- d. Release of excessive water vapour in the atmosphere resulting in foggy weather

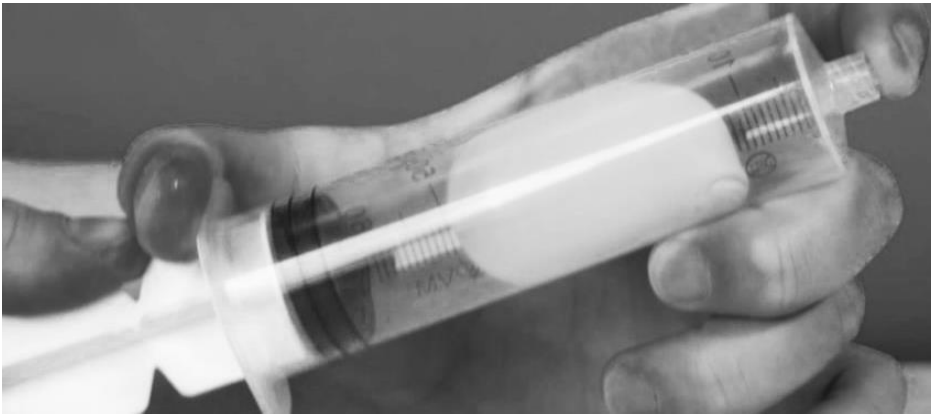
33. Of the following examples, which is a liquid-liquid solution?

- a. Saltwater
- b. Vinegar solution
- c. Air
- d. Steel

34. Does light travel faster in water than in air?

- a. Yes
- b. No
- c. Maybe
- d. Can't be determined

35. Students are given a balloon, a syringe, and an empty plastic bottle. They are asked to push the syringe's plunger when the balloon is inside the bottle. The balloon slightly inflates as air is pushed in. What property of air is being demonstrated here?



- a. Air has no mass.
- b. Air cannot be compressed.
- c. Air is invisible and does not take up space.
- d. Air occupies space and can be compressed.

36. Which of these is used to measure frequency?

- a. Decibel
- b. Hertz
- c. Ampere
- d. None of these

37. Which of the following statements is INCORRECT?

- a. When a solid changes directly into a gas on heating, we call it evaporation.
- b. When a solid changes into a liquid on heating, it is called melting.
- c. When a gas changes into a liquid on cooling, it is called condensation.
- d. When a gas directly changes into a solid on cooling, it is called deposition.

38. If a rectangle has a length of 8 cm and a breadth of 3 cm, what is its area?

- a. 24 cm^2
- b. 11 cm^2
- c. 48 cm^2
- d. 16 cm^2

39. After sedimentation, what method is used to pour off the clear liquid without disturbing the settled particles?

- a. Filtration
- b. Decantation
- c. Distillation
- d. Evaporation

40. Aditi sprays some perfume in one corner of her room. After a few moments, she notices that she can smell the perfume from the other side of the room. Which property of gases allows the aroma to spread throughout the room?

- a. The molecules are close to each other.
- b. The molecules move freely in all directions.
- c. The molecules have less space between them.
- d. The molecules take the shape of the container.

41. A student uses this information to calculate work.

$$\text{Work} = \text{Force} \times \text{Distance}$$

Based on the information, if someone applies a force of 15 Newtons (N) over a distance of 4 meters (m), how much work is done?

- a. 45 Joules (J)
- b. 30 Joules (J)
- c. 60 Joules (J)
- d. 75 Joules (J)

42. If a shadow is small, where is the light source likely to be positioned?

- a. Very close to the object
- b. Very far from the object
- c. Directly above the object
- d. At an angle of 45 degrees from the object

43. Ramesh's family uses a lot of coal and wood for cooking at home. Recently, they noticed more smoke and soot collecting inside the house, making breathing difficult. Which type of fuel could Ramesh switch to for a cleaner and healthier cooking environment?

- a. Diesel
- b. Kerosene
- c. LPG (Liquid Petroleum Gas)
- d. Petrol

44. In which of these situations would you experience an echo?

- a. Walking in a densely packed forest
- b. Speaking in a large, empty hall
- c. Listening to music in a furnished room
- d. Running along a crowded beach

45. A student claps her hands in a large, empty hall and hears the sound repeated. Based on this information, what can be inferred about the properties of sound?

- a. Sound waves pass directly through surfaces.
- b. Sound waves reflect off surfaces, creating an echo.
- c. Sound waves are absorbed by the floor and walls.
- d. Sound travels in a straight line without reflecting.

46. What is the conversion factor to change 5 km to meters?

- a. Multiply by 10.
- b. Multiply by 100.
- c. Multiply by 1000.
- d. Divide by 1000.

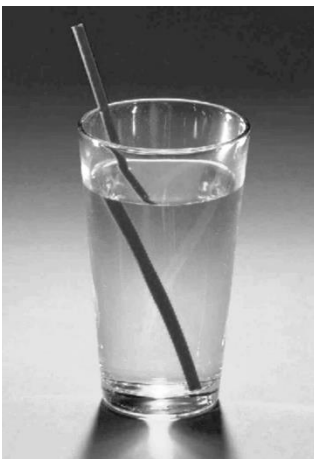
47. Which property of a sound wave determines its pitch?

- a. Amplitude
- b. Frequency
- c. Loudness
- d. Wavelength

48. A city is facing severe water scarcity. Which of the following methods could be most effective in managing the limited water supply sustainably?

- a. Increasing groundwater extraction
- b. Implementing rainwater harvesting systems
- c. Using more river water for irrigation
- d. Increasing urban development in areas where water is limited

49. Observe the straw placed in the glass of water. It appears bent or broken at the surface. What concept does this demonstrate?



- a. Reflection of light
- b. Absorption of light
- c. Refraction of light
- d. Dispersion of light

50. Ice is placed inside a clear glass and covered with a lid. After a few minutes, water droplets appear on the outside of the glass. What is the source of these droplets?

- a. The glass is evaporating.
- b. The droplets come from moisture in the surrounding air.
- c. The glass is leaking water from the bottom.
- d. The glass is melting.

