

Grade
7

S-CAT Assessment Round Sample Question Paper

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.
- On the answer sheet blacken the correct option against the corresponding question number,

The Correct Method

Q.	Answer
1	(A) (B) ● (D)

The Wrong Methods

Q.	Answer
1	(A) ● ● (D)
1	(A) (B) ● (D)
1	(A) (B) ✓ (D)
1	(A) (B) ✗ (D)

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

- 1. Which of the following statements about ruminants is true?**
 - a. They have a single stomach chamber.
 - b. They digest cellulose with the help of microorganisms.
 - c. They only chew their food once.
 - d. Their stomach enzymes digest cellulose without microbial help.
- 2. If the iodine solution does not change colour in a test tube with chewed rice, what does this indicate about the starch content?**
 - a. Starch is still present.
 - b. Starch has been completely broken down.
 - c. No saliva was present.
 - d. None of the above.
- 3. Which type of connective tissue would be abundant in animals living in cold climates and why?**
 - a. Areolar tissue, for connecting skin to muscles
 - b. Adipose tissue, for providing insulation against cold
 - c. Bone tissue, for providing movement and protection
 - d. Blood tissue, for transporting nutrients
- 4. What would happen to a plant if its stomata were blocked?**
 - a. It would not be able to absorb sunlight.
 - b. It would not be able to take in carbon dioxide.
 - c. It would not be able to absorb water.
 - d. It would not be able to produce chlorophyll.
- 5. Which of the following statements correctly matches the tissue type with its function?**
 - a. Xylem - Conducts food both in upward and downward directions
 - b. Phloem - Provides mechanical support to the plant body
 - c. Nervous tissue - Provides a structural framework for the body
 - d. Epithelial tissue - Prevents the entry of germs and mechanical injury
- 6. Which type of teeth are primarily used for tearing food?**
 - a. Incisors
 - b. Canines
 - c. Premolars
 - d. Molars
- 7. Which of the following statements is INCORRECT regarding the types of muscles in the human body?**
 - a. Striated muscles are involved in voluntary movements.
 - b. Smooth muscles are responsible for peristalsis.
 - c. Cardiac muscles are found in the lungs and are under voluntary control.
 - d. Smooth muscles are not controlled by will.
- 8. What is the expected observation when mixing iron filings and sulphur powder and heating them?**
 - a. The mixture glows and forms a black compound.
 - b. The mixture dissolves in water.
 - c. The mixture changes colour but no new substance forms.
 - d. The mixture remains unchanged.

- 9. According to data, at rest, a person consumes 0.3 L/min of oxygen. How much oxygen is consumed in 10 minutes at rest?**
- 1.5 L
 - 3.0 L
 - 15.0 L
 - 18.0 L
- 10. What property makes mercury useful in thermometers?**
- It is solid at room temperature.
 - It is a poor conductor of heat.
 - It expands and contracts uniformly with temperature changes.
 - It is highly reactive.
- 11. Which of the following statements about aerobic respiration is incorrect?**
- It produces more energy compared to anaerobic respiration.
 - It occurs in the presence of oxygen.
 - It produces lactic acid as a by-product.
 - It results in the complete breakdown of glucose.
- 12. Which type of pollination involves transferring pollen in the same flower?**
- Wind pollination
 - Self-pollination
 - Cross-pollination
 - Insect pollination
- 13. In an experiment on plant propagation, which method would be most effective for producing genetically identical plant offspring?**
- Grafting
 - Budding
 - Insect pollination
 - Cross-pollination
- 14. Which instrument is used to measure the heart rate during an experiment?**
- Thermometer
 - Stethoscope
 - Barometer
 - Microscope
- 15. Why are dark-coloured clothes preferred in winter?**
- They are stylish.
 - They are more comfortable.
 - They reflect heat away.
 - They absorb more heat from the sun.
- 16. What change occurs in red litmus paper when it is dipped in a basic solution?**
- It remains red.
 - It turns blue.
 - It turns green.
 - It turns yellow.

- 17. To study the impact of external factors on the plant's water transport system, which tissue would be crucial to examine?**
- Phloem
 - Xylem
 - Parenchyma
 - Collenchyma
- 18. Why is the melting of ice considered a physical change?**
- It involves a change in chemical composition.
 - It produces new substances.
 - It changes the state without altering the chemical composition.
 - It is irreversible.
- 19. In the given equation $3\text{H}_2(\text{g}) + \text{N}_2(\text{g}) \rightarrow 2\text{NH}_3(\text{g})$, which of the following statement is true?**
- Nitrogen atoms are more on the reactant side.
 - There are a total of 9 hydrogen atoms on the reactant side.
 - The equation is balanced with a coefficient of 2 in NH_3 .
 - This equation represents a combustion reaction.
- 20. Which forest layer primarily receives the most sunlight and supports the majority of photosynthesis?**
- Shrub layer
 - Herb layer
 - Canopy
 - Forest floor
- 21. During a neutralisation reaction between hydrochloric acid (HCl) and sodium hydroxide (NaOH), what is the expected pH of the resulting solution?**
- 1
 - 7
 - 13
 - 14
- 22. If a laboratory thermometer shows a mercury level below -10°C , what does this suggest about its usage?**
- Incorrect usage.
 - Measurement of a very cold substance.
 - Defectiveness.
 - Need for recalibration.
- 23. What is the visible evidence of a chemical change when baking soda is mixed with vinegar?**
- Change in colour
 - Formation of a new solid
 - Bubbling and fizzing
 - Melting
- 24. If you want to determine the effect of different resistances on current, what should you vary in your experiment?**
- The resistance in the circuit
 - The voltage of the cell
 - The type of wire used
 - The temperature of the circuit

25. Which statement is NOT true about chemical symbols?

- a. They are standardized and used globally.
- b. They can contain one or two letters.
- c. The first letter is always lowercase.
- d. Some symbols are derived from Latin names.

26. In industrial processes, what is the purpose of neutralizing acidic waste with bases?

- a. To increase acidity for specific chemical reactions
- b. To create new chemical compounds
- c. To enhance the efficiency of production processes
- d. To reduce harmful effects on the environment

27. A hypothesis states that more salt in water speeds up crystallization. What is the best way to test this?

- a. Move the experiment to a different place and check.
- b. Keep the temperature constant and vary the salt concentration.
- c. Change the type of salt used.
- d. Observe the colour change of the solution.

28. When conducting an experiment with a simple pendulum, what should be done to ensure accurate measurement of its period?

- a. Use a longer string for the pendulum.
- b. Measure the time for multiple oscillations and then average.
- c. Use a heavier bob.
- d. Measure the time for a single oscillation.

29. What is the primary difference between speed and velocity?

- a. Speed includes direction, but velocity does not.
- b. Speed is a scalar quantity, while velocity is a vector quantity.
- c. Velocity is always greater than speed.
- d. Speed measures distance, while velocity measures time.

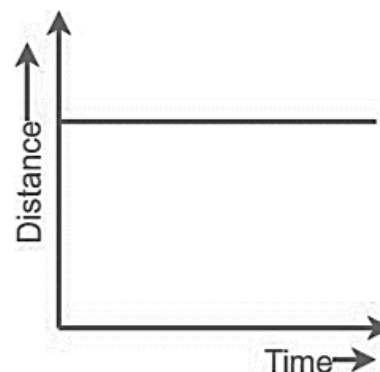
30. Which option correctly represents a molecule with two hydrogen atoms and one oxygen atom?

- a. H_2O
- b. HO_2
- c. OH_2
- d. O_2H

31. Refer to the distance-time graph.

If the graph shows a horizontal line, what can be inferred about the object's motion?

- a. The object is moving at a constant speed.
- b. The object is accelerating.
- c. The object is decelerating.
- d. The object is at rest.



- 32. In a concave mirror, what type of image is formed when the object is placed at the focal point?**
- Virtual and erect
 - Real and inverted
 - Virtual and inverted
 - Real and erect
- 33. Why is the reaction between quicklime and water described as exothermic?**
- It produces a gas.
 - It changes colour.
 - It releases heat.
 - It forms a solid precipitate.
- 34. In which mode of heat transfer does the movement of particles play a critical role?**
- Insulation
 - Convection
 - Radiation
 - Reflection
- 35. Which method is NOT used for separating substances in a mixture?**
- Filtration
 - Evaporation
 - Sedimentation
 - Chemical Equation
- 36. Which of the following is an example of a homogeneous mixture?**
- Sand and iron filings
 - Fruit salad
 - Saltwater
 - Oil and water
- 37. Which substance is commonly used as an antacid to neutralize excess stomach acid?**
- Baking soda
 - Vinegar
 - Lemon juice
 - Hydrochloric acid
- 38. Which principle explains how mirrors show our reflection?**
- Light is absorbed by the mirror.
 - Light is refracted by the mirror.
 - Light is scattered by the mirror.
 - Light is reflected by the mirror.
- 39. Which property of metalloids makes them valuable for use in electronic devices?**
- High conductivity
 - Semi-conductivity
 - Complete brittleness
 - High malleability

- 40. Which of the following mixtures can be separated using chromatography to reveal different coloured pigments?**
- a. Salt water
 - b. Ink from pens or markers
 - c. Sugar solution
 - d. Oil and water mixture
- 41. How should the clinical thermometer be held when reading the temperature?**
- a. By the bulb
 - b. By the stem, ensuring the mercury level is below 35°C
 - c. By keeping the level of mercury along the line of sight
 - d. By the end opposite to the bulb
- 42. In an experiment to measure the resistance of different materials, what instrument would you use?**
- a. Ohmmeter
 - b. Voltmeter
 - c. Ammeter
 - d. Galvanometer
- 43. What is the primary purpose of creating protected areas such as national parks and wildlife sanctuaries in forest conservation?**
- a. To conserve forest biodiversity and ecosystem integrity
 - b. To increase tourism revenue
 - c. To promote sustainable logging practices
 - d. To establish commercial logging opportunities
- 44. When observing sunlight through a prism to study its colours, what phenomenon are you investigating?**
- a. Reflection
 - b. Refraction
 - c. Diffraction
 - d. Dispersion
- 45. "A convex lens can be used to start a fire", what is the underlying scientific principle you are testing in this statement?**
- a. Light reflection
 - b. Light absorption
 - c. Light convergence
 - d. Light dispersion
- 46. What happens to the electric circuit of the bell when the hammer strikes the bell?**
- a. The current flow increases.
 - b. The magnetic field strengthens.
 - c. The circuit is broken.
 - d. The iron piece is permanently attracted.
- 47. Why should you avoid putting too many plugs in a socket?**
- a. it looks aesthetic.
 - b. It may cause the wires to overheat and cause a fire.
 - c. It will increase the electrical efficiency.
 - d. It may cause the plugs to leak water.

48. Which statement is TRUE about compounds and mixtures?

- a. Compounds can be separated into their elements by physical means.
- b. Mixtures have properties different from the substances that make them up.
- c. Compounds are always formed by elements in a fixed ratio.
- d. Mixtures are chemically bonded.

49. Why is it important to replace oxygen in fish tanks regularly?

- a. To prevent algae growth
- b. To maintain water clarity
- c. To ensure fish can breathe properly
- d. To reduce ammonia levels

50. If a person's saliva production is reduced, which part of the digestion process is directly affected first?

- a. Protein digestion in the stomach
- b. Starch breakdown in the mouth
- c. Fat emulsification in the small intestine
- d. Water absorption in the large intestine

