



S-CAT GRAND FINALE

Sample Paper

(Based on the new exam pattern)



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.
- **New Exam Pattern:**
 1. Each question will carry 1, 2, or 4 marks, depending on its difficulty level.
 2. **Negative Marking:** Additional marks will be deducted for every incorrect answer (0.25 marks for a 1-mark question, 0.5 marks for a 2-mark question, and 1 mark for a 4-mark question).
 3. The Assessment Round score will be included in the Grand Finale score using a weighted average method. 30% of the Assessment Round and 70% of the Grand Finale score.
 4. New Method to Calculate Marks for Grand Finale Awards.

	Assessment Round	Grand Finale
Actual Marks	60	80
Weightage	30%	70%
Marks After Weighted Average Rule	$60 \times 30/100 = 18$	$80 \times 70/100 = 56$
Final Marks for Grand Finale Awards	$18 + 56 = 74$	

- 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.

All The Best !

SECTION 1: Concept Check

1. Choose the option that is INCORRECT. (1m)

- a. Carbohydrates give energy to run, jump, and play.
- b. Proteins help us grow tall and strong.
- c. Vitamins and minerals help our body to fight diseases and protect us from falling sick.
- d. Fats protect us from diseases.

2. What happens to undigested food in the digestive system? (1m)

- a. It is stored in the liver.
- b. It is absorbed into the blood.
- c. It is removed as waste through the anus.
- d. It is converted into energy.

3. What is the primary function of roots in plants? (1m)

- a. Capture sunlight
- b. Anchor the plant and absorb water
- c. Help in photosynthesis
- d. Produce flowers

4. Which of the following can decompose naturally? (1m)

- a. Plastic bags
- b. Banana peels
- c. Glass bottles
- d. Aluminum cans

5. Which organ filters blood to produce urine? (1m)

- a. Lungs
- b. Kidney
- c. Liver
- d. Bladder

6. Burning fossil fuels can lead to: (1m)

- a. Cleaner air
- b. More recycling
- c. Increased air pollution
- d. Greater use of solar energy

7. What is the standard unit for measuring body temperature? (1m)

- a. Meters (m)
- b. Degrees Celsius (°C)
- c. Litres (L)
- d. Kilograms (kg)

8. Why can we see the Moon even though it is not a luminous object? (1m)

- a. It produces light during the night.
- b. It gets light from street lamps.
- c. It absorbs light from Earth.
- d. It reflects light from the Sun.

9. What is the primary function of the digestive system? (1m)

- a. To remove waste from the body
- b. To break down food into simpler forms
- c. To absorb oxygen from the environment
- d. To transport nutrients through the blood

10. Why should we drink plenty of water every day? (1m)

- a. To avoid sweating
- b. To help kidneys filter waste effectively
- c. To stop urine production
- d. To reduce the need for food

SECTION 2: Skill Application

11. A family wants to keep milk fresh for a longer time. Which method would be most suitable? (2m)

- a. Leaving it uncovered
- b. Keeping it in sunlight
- c. Keeping it in a refrigerator
- d. Keeping it near a stove

12. What do the objects knife, a doorstop and an axe have in common? (2m)

- a. They use a wedge
- b. They use a pulley
- c. They use a wheel and axle
- d. They use a screw

13. A plant grows in a region with very little water.

Which of these features is it most likely to have? (2m)

- a. Broad, flat leaves
- b. Thick, waxy stems
- c. Bright flowers for pollination
- d. Weak, shallow roots

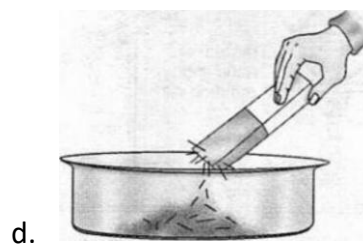
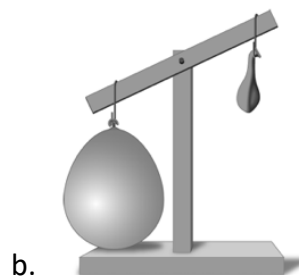
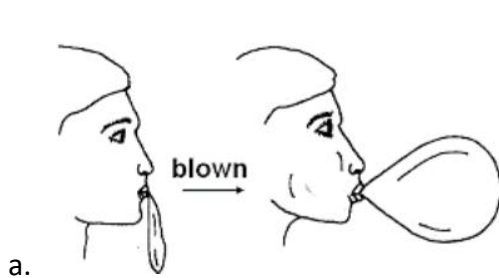
14. A bird with webbed feet and waterproof feathers lives near a lake. Which of these can you conclude about its habitat? (2m)

- a. It lives in a desert.
- b. It migrates to the mountains during winter.
- c. It is adapted to aquatic environments.
- d. It uses its feet to climb trees.

15. A person suffers from diarrhoea after eating contaminated food. Which part of the digestive system is most likely affected? (2m)

- a. Mouth
- b. Stomach
- c. Kidney
- d. Large intestine

16. Which of the following experimental set ups demonstrate that air occupies space. (2m)



17. A city experiences high levels of noise pollution due to increased vehicle traffic. What is the most likely long-term impact on people who live there? (2m)

- a. Improved hearing ability
- b. Reduced sleep and stress levels
- c. Hearing loss and health issues
- d. Improved air quality

18. Scientists observe that Earth's average temperature is increasing as the amount of greenhouse gases in the atmosphere rises. What can they conclude about the role of greenhouse gases? (2m)

- a. They trap heat in the atmosphere and keep Earth warm.
- b. They produce oxygen for people to breathe.
- c. They stop clouds from forming.
- d. They remove heat from Earth and cool the planet.

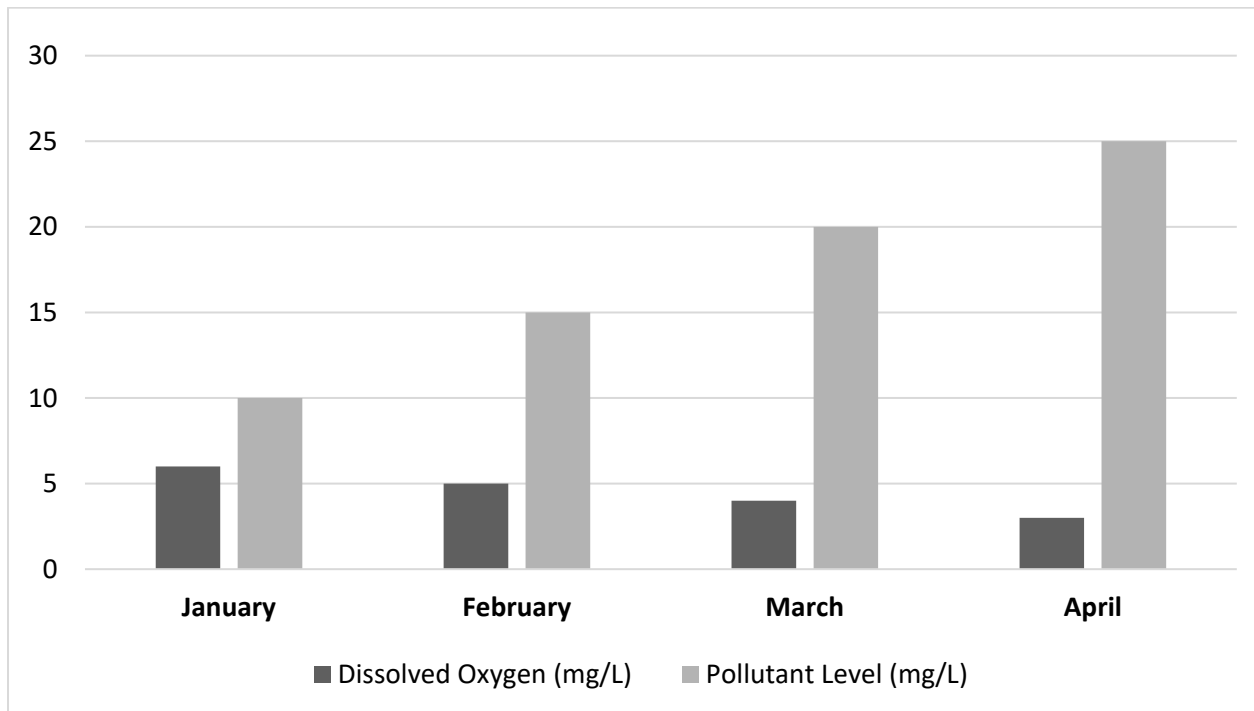
- 19. A student uses a ramp to move a heavy box into a truck. The ramp allows the student to move the box with less effort. Why is the ramp considered a simple machine? (2m)**
- It uses electricity to move the box.
 - It makes the box heavier.
 - It makes work easier by changing the amount or direction of force needed.
 - It prevents the box from moving.
- 20. If a glass of cold water develops droplets on the outside, what process has occurred? (2m)**
- Evaporation
 - Condensation
 - Freezing
 - Precipitation
- 21. Which of these factors is most directly responsible for changes in weather? (2m)**
- Air pollution
 - Rotation of the Earth
 - The Sun's heat
 - The size of the clouds
- 22. Both fish and humans need oxygen to survive. Humans use their lungs to take in oxygen from the air, while fish live underwater. How does a fish get the oxygen it needs? (2m)**
- Fish use lungs to take oxygen from air.
 - Fish use fins to take oxygen from water.
 - Fish use flippers to take oxygen from water.
 - Fish use gills to take oxygen from water.
- 23. Which simple machine would you use to split a piece of wood? (2m)**
- Pulley
 - Lever
 - Wedge
 - Screw
- 24. Which property of water allows us to see underwater creatures and objects? (2m)**
- Transparency
 - Density
 - Solubility
 - Opacity
- 25. When air is pumped into a football, the football becomes hard and round. Which property of air is responsible for this? (2m)**
- Air is transparent
 - Air has mass
 - Air exerts pressure
 - Air has no volume

SECTION 3: Case-Based Science

- 26. Neena needs to draw water from a well. Which simple machine would be the most useful for lifting a heavy bucket from the well? (2m)**
- Wedge
 - Lever
 - Pulley
 - Screw
- 27. Ritu must design an experiment to demonstrate that plants lose water through their leaves. Which of the following materials must she use? (2m)**
- A candle, a pot, and soil
 - A polythene bag, a plant branch, and sunlight
 - A thermometer, a glass of water, and a leaf
 - A ruler, a seed, and sand

Anaya, Rohan, and Vivaan are investigating the water quality of a river near their school. They collected water samples each month and recorded the pollution levels in the table below.

Study the table carefully and answer the questions 28 and 29.



28. In which month, the river experienced the highest level of pollution? (2m)

- a. January
- b. February
- c. March
- d. April

29. What can they conclude based on the data? (2m)

- a. Dissolved oxygen stays the same with the increase in pollutants.
- b. Dissolved oxygen increases as pollutants increase.
- c. Dissolved oxygen decreases as pollutants increase.
- d. Pollutants do not affect dissolved oxygen.

30. Emma places a mirror on a table and shines a flashlight toward it. She notices that the light shines onto a nearby wall. What does this activity show? (2m)

- a. Light can bounce off a shiny surface and change direction.
- b. Light can bend when it travels through clear materials.
- c. Light can pass through objects without changing its direction.
- d. Light can disappear when it reaches a smooth surface.

31. Neha has poor eyesight and struggles to see in the dark.

Which nutrient might she be deficient in? (2m)

- a. Vitamin A
- b. Vitamin C
- c. Calcium
- d. Iron

32. During a walk in a garden, Riya notices a green insect sitting on a leaf. Its body looks very similar to the leaf, making it difficult to see. Which adaptation of insects is she observing? (2m)

- a. Hibernation
- b. Migration
- c. Camouflage
- d. Germination

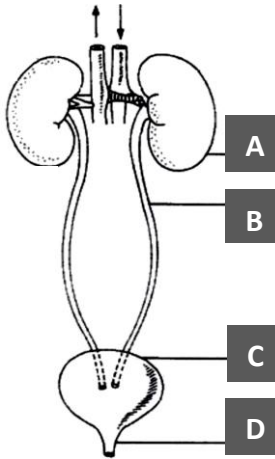
- 33. Sam is eating a piece of bread. His mother asks him to chew it slowly before swallowing. After chewing it for a while, Sam notices that the bread becomes soft and slightly sweet. What causes this change in the mouth? (2m)**
- The oesophagus mixes the bread with digestive juices.
 - The teeth change the bread into sugar.
 - The tongue absorbs nutrients from the bread.
 - Saliva starts breaking down some of the food.
- 34. During a science lesson, the teacher explains that sometimes a person may lose one kidney because of health issues. What will happen if the person has only one healthy kidney left? (2m)**
- The remaining kidney can filter the blood and support normal body functioning.
 - The body will not be able to remove wastes properly.
 - The person will need a kidney transplant to survive.
 - The remaining kidney will stop working after some time.
- 35. Dev's class is planting more trees around the neighbourhood. He has learnt in science class that air is made up of a mixture of gases. Which gas is likely to decrease in the surrounding air as the number of trees increases? (2m)**
- Carbon dioxide
 - Oxygen
 - Nitrogen
 - Water vapour
- 36. During a classroom activity, Kabir and Diya are measuring different objects. Kabir uses a ruler to measure the length of a pencil, while Diya uses a measuring cup to measure water. Based on their activity, choose the correct statement. (2m)**
- The amount of liquid is measured in metres, while litres measure length.
 - Length is measured in metres, while litres measure the amount of liquid.
 - Both length and liquid are measured in litres.
 - Length and liquid cannot be measured using standard units.
- 37. Oliver's family wants to make a more environmentally friendly choice while shopping. They decide to carry reusable cloth bags instead of taking new plastic bags each time. Which principle are they following? (2m)**
- Reduce
 - Segregation
 - Recycle
 - Compost
- 38. Maya takes an ice cube out of the freezer and places it on a plate. She forgets the plate near a sunny window. Later, when she comes back, the plate is empty. What happened to the ice cube? (2m)**
- It froze and then condensed.
 - It melted and then evaporated.
 - It evaporated and then froze.
 - It condensed and then melted.
- 39. Yash notices that a small wooden block floats in water, while a metal coin sinks. Which property of water is demonstrated in this experiment? (2m)**
- Objects denser than water float, while objects less dense than water sink.
 - Objects less dense than water float, while objects denser than water sink.
 - Objects larger in size sink in water while objects smaller in size float
 - Objects smaller in size sink in water while objects larger in size float

- 40. Zack is cycling in his neighbourhood. A cat jumps in front of him so he applies the brakes to stop his bicycle. The force that makes his bicycle stop in time is a _____. (2m)**
- a. Magnetic force
 - b. Non-contact force
 - c. Contact force
 - d. Gravitational force
- 41. Aarav placed wooden block, a clear glass sheet, and a transparent plastic sheet using a torch. The wooden block forms the darkest shadow. What can Aarav conclude from this activity? (2m)**
- a. Opaque objects do not let light pass through them.
 - b. Transparent objects do not let light pass through them.
 - c. Opaque objects allow all light to pass through them.
 - d. Transparent objects form the darkest shadows.
- 42. Arya wants to open a tightly closed bottle of juice. She uses a bottle opener to remove the cap. The bottle opener works as a lever. Where is the fulcrum of the lever located? (2m)**
- a. At the handle of the bottle opener
 - b. At the point where the opener rests on the top of the bottle
 - c. At the centre of the bottle cap
 - d. At Arya's hand
- 43. Arjun placed a metal spoon in a cup of hot tea. After a few minutes, the spoon became hot. What does this show? (2m)**
- a. The spoon absorbs water from the tea.
 - b. Metals produce heat.
 - c. Cold moves from the tea to the spoon.
 - d. Heat can travel through metals.
- 44. Meena drinks a glass of plain water and notices that it has no particular taste. Her brother adds sugar to another glass, and the water tastes sweet. What can she conclude? (2m)**
- a. Plain water has a sweet taste.
 - b. Plain water is naturally tasteless.
 - c. Sugar does not dissolve in water
 - d. Water always has a sour taste.
- 45. A shopkeeper has a large sack of rice and wants to find out how much it weighs. Which instrument would be most suitable? (2m)**
- a. Thermometer
 - b. Measuring cylinder
 - c. Measuring tape
 - d. Weighing scale

SECTION 4: Challenger's Section

- 46. Read the given four statements about force carefully and choose the correct option: (4m)**
- i. A force can make a moving object stop.
 - ii. A force can make a stationary object move.
 - iii. Force can change the direction of a moving object.
 - iv. Force cannot change the shape of an object.
- a. Only i and ii are true
 - b. Only ii and iv are true
 - c. Only i, ii, and iii are true
 - d. All four statements are true

47. Observe the picture and choose the correct option. (4m)



- A- Kidney, B- Ureter, C- Urethra, D-Urinary bladder
- A- Urinary bladder, B- Ureter, C- Urethra, D- Kidney
- A-Kidney, B- Urinary bladder, C- Urethra, D- Ureter
- A-Kidney, B- Ureter, C-Urinary bladder, D- Urethra

48. Charlie's garden has several plants, but some of them are looking weak and unhealthy. His mother adds fertiliser to the soil around the plants. After a few days, Charlie notices that the plants have become greener and healthier. (4m)

Read the following statements and answer the question:

Statement 1: Fertilisers add nutrients to the soil.

Statement 2: Fertilisers replace the need for sunlight.

Statement 3: Plants absorb nutrients from the soil through their roots.

Statement 4: Plant roots absorb nutrients from the air.

Which of the following is correct?

- Statements 1 and 2 are true.
- Statements 1 and 4 are true.
- Statements 1 and 3 are true.
- Statements 2 and 3 are true.

49. A scientist studies four animals and records their features. (4m)

Animal A: has gills and fins

Animal B: has thick fur and a layer of fat

Animal C: has wide feet and long legs

Animal D: has a long tail and strong limbs.

Which habitats are these animals most likely adapted to?

- A—cold region, B—desert, C—water, D—forest
- A—desert, B—water, C—forest, D—cold region
- A—water, B—cold region, C—desert, D—forest
- A—forest, B—desert, C—cold region, D—water

50. Harry usually eats white bread, rice and noodles that give him energy, but he rarely eats fruits, vegetables or whole grains. His teacher explains that his meals should include different types of food. What is Harry's diet most likely lacking? (4m)

- Fibre and vitamins
- Carbohydrates and proteins
- Fats, vitamins and proteins
- Fats, minerals and carbohydrates

