

Grade
6

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



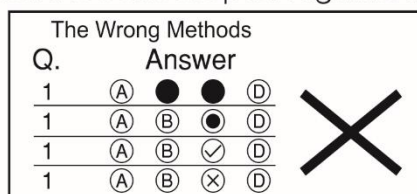
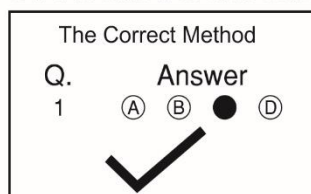
QUESTIONS
50



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. Given below is the nutrient profile of Black Chana. Which is the major nutrient found in them?

Nutrient Profile of Black Chana (100 grams, raw)

Nutrient	Amount	Unit
Energy	360	kcal
Protein	19.5	g
Carbohydrates	58.9	g
Dietary Fibre	17.5	g
Fat	6.7	g
Saturated Fat	0.69	g
Polyunsaturated Fat	2.67	g
Mono-unsaturated Fat	1.36	g

- a. Proteins b. Carbohydrates c. Vitamins d. Fats
2. Nisha is unable to see properly in dim light. What should be included in her diet?
- a. Pulses b. Fish c. Carrots d. Cheese
3. Manish wants to find out if a food contains starch. What is the result when iodine solution is added to a food item containing starch?
- a. It turns red. b. It turns blue-black.
c. It turns yellow. d. No change
4. What is the main function of stomata in leaves?
- a. To store food b. To exchange gases
c. To absorb sunlight d. To produce flowers
5. If the xylem in a plant is damaged, which process will be affected first?
- a. Transport of food b. Formation of flowers
c. Transport of water d. Photosynthesis
6. Which adaptation helps aquatic plants to float on water?
- a. Thick roots b. Hollow stems c. Hard leaves d. Deep roots
7. Nerium is a desert plant, which has thick and waxy leaves. How do these adaptations help it to survive?



- a. To attract insects b. To reduce water loss
c. To perform more photosynthesis d. To store sunlight

8. If a factory releases untreated waste into a river, which of the following is most likely to happen?

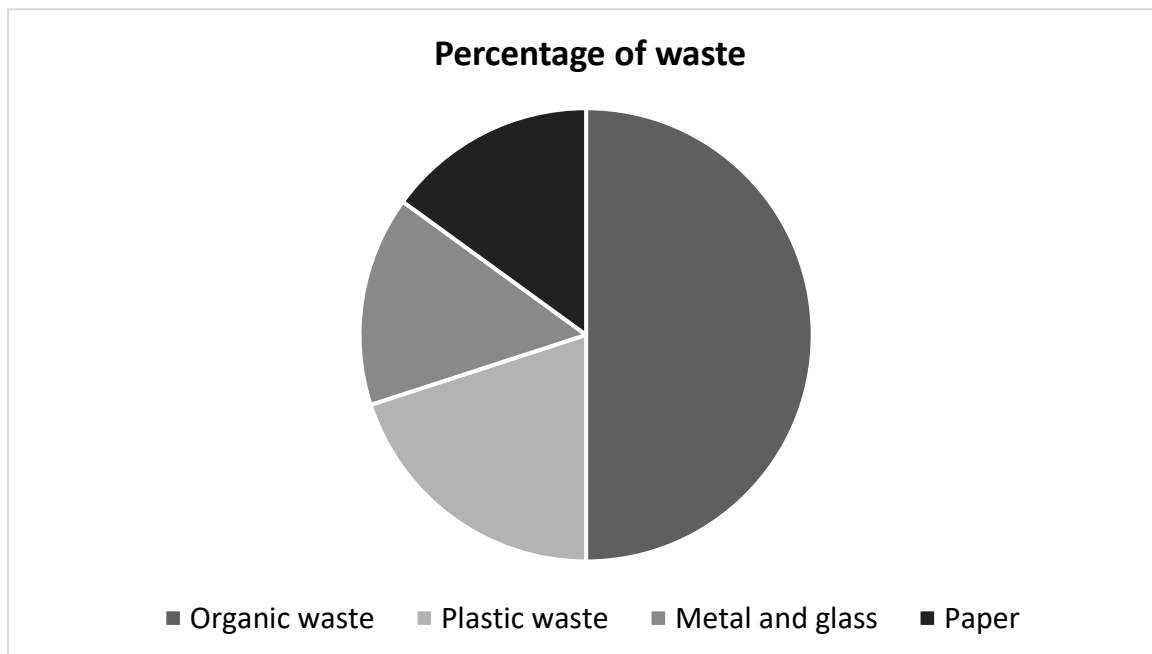


- a. The water will become clearer.
- b. Aquatic animals will thrive.
- c. The water will become polluted and plants and animals may die.
- d. Plants near the river will grow faster.

9. If waste is not segregated at home, which of the following problems may arise?

- a. Increase in the recycling process
- b. Easy decomposition of waste
- c. Difficulty in managing waste
- d. Faster decomposition of plastic

10. The pie chart below shows the percentage of waste generated in a city:



Based on the data above, which type of waste can be composted to significantly reduce environmental pollution?

- a. Plastic waste
- b. Metal and glass
- c. Paper
- d. Organic waste

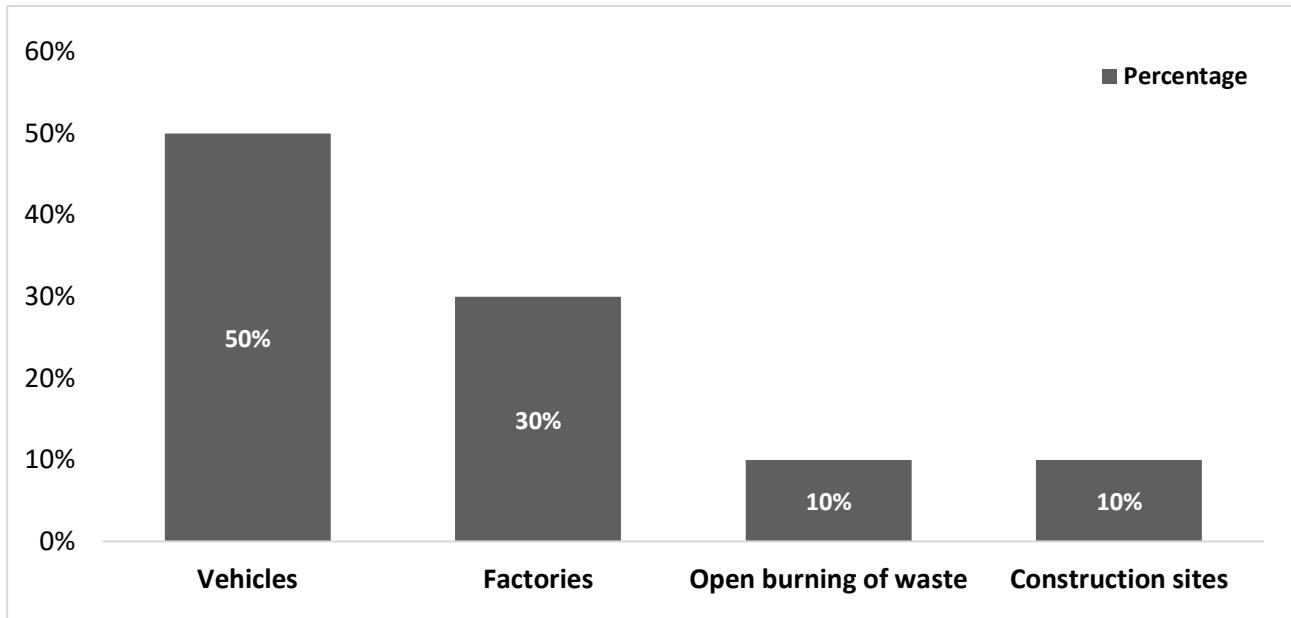
11. While observing a polluted pond, you notice fewer fish and an unpleasant smell. What could be the main reason?

- a. High oxygen levels
- b. Excessive waste and pollutants
- c. Lack of sunlight
- d. More aquatic plants

12. Your friend uses plastic bags for shopping. What advice will you give to promote eco-friendly behaviour?

- Suggest using paper or cloth bags
- Encourage using more plastic bags
- Advise dumping plastic bags in rivers
- Recommend burning plastic bags after use

13. The following graph shows the sources of air pollution in a city.



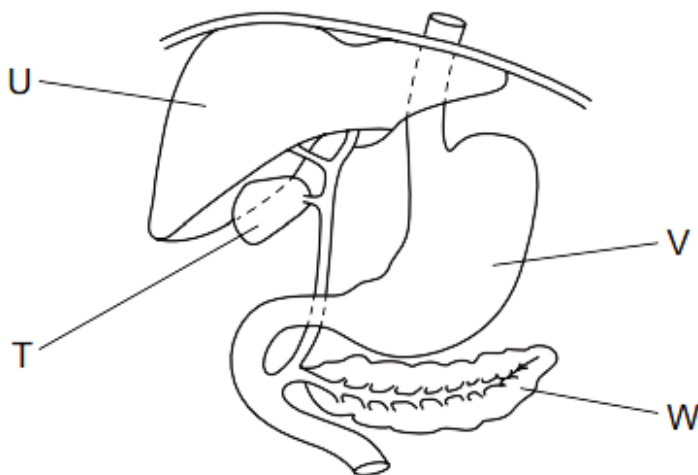
What could be the most effective way to reduce air pollution in this city?

- Ban all factories.
- Promote electric vehicles and carpooling.
- Stop all construction projects.
- Encourage burning of waste in controlled areas.

14. If there is a sharp increase in respiratory diseases in a city, what could be the possible reason?

- Contaminated drinking water
- Poor waste management
- Air pollution due to industrial emissions
- Excessive use of chemical fertilizers

15. The diagram below shows a part of the alimentary canal.



Which organ is responsible for producing bile?

- Only V
- V and W
- Only U
- U and T

- 16. Saliva contains an enzyme that begins the digestion of carbohydrates. What is this enzyme, and what is its function?**
- Pepsin: breaks down protein
 - Amylase: breaks down starch into simple sugars
 - Lipase: breaks fats into fatty acids
 - Trypsin: helps in protein digestion
- 17. A student observes that eating fibrous foods reduces constipation. What conclusion can be drawn from this observation?**
- Fibrous foods provide energy.
 - Fibrous foods help clean the digestive tract.
 - Fibrous foods produce digestive enzymes.
 - Fibrous foods are stored in the body.
- 18. After running a race, you notice that your breathing is rapid. Why does this happen?**
- The body needs more oxygen to produce energy.
 - The body is trying to release excess water.
 - The body is cooling itself down.
 - The heart rate decreases as you exercise.
- 19. Where does the exchange of gases (oxygen and carbon dioxide) take place in the lungs?**
- Bronchi
 - Bronchioles
 - Alveoli
 - Trachea
- 20. Why do humans need to inhale oxygen and exhale carbon dioxide?**
- Oxygen is used to break down food and release energy, carbon dioxide is produced in the process and needs to be removed.
 - Oxygen is a waste product that needs to be expelled.
 - Carbon dioxide is used by the body for cellular processes and needs to be inhaled.
 - Oxygen helps in the storing of food, while carbon dioxide helps in respiration.
- 21. What is the correct sequence for blood being pumped from the heart to the lungs?**
- Left atrium → left ventricle → pulmonary artery
 - Left atrium → left ventricle → pulmonary vein
 - Right atrium → right ventricle → pulmonary artery
 - Right atrium → right ventricle → pulmonary vein
- 22. If you take a drop of blood and place it on a glass slide, then observe it under a microscope, what will you observe?**
- Only white blood cells
 - Only plasma
 - Red blood cells, white blood cells and platelets
 - Platelets and plasma
- 23. Which of the following habits can help maintain a healthy circulatory system?**
- Eating foods high in fats and sugars
 - Avoiding regular exercise
 - Eating a balanced diet and exercising regularly
 - Smoking regularly
- 24. Which organism is responsible for causing diseases like malaria and sleeping sickness?**
- Bacteria
 - Virus
 - Protozoa
 - Fungi

25. Why are vaccines important in preventing diseases?

- a. They completely cure diseases.
- b. They stimulate the immune system to fight specific diseases.
- c. They kill harmful bacteria in the body.
- d. They directly eliminate the cause of diseases.

26. What is the best way to prevent the spread of viral infections like the flu in a crowded area?

- a. Washing hands with soap and water regularly
- b. Keeping windows closed
- c. Sharing food with others
- d. Avoiding any form of physical activity

27. What is the basic structural and functional unit of life?

- a. Organ
- b. Tissue
- c. Cell
- d. Organism

28. What would happen to a plant if its chloroplasts stopped functioning?

- a. The plant would no longer be able to perform photosynthesis.
- b. The plant would produce more oxygen.
- c. The plant would increase its growth rate.
- d. The plant would stop breathing.

29. When observing a cell under a microscope, you see a large central vacuole. What type of cell are you most likely observing?

- a. Animal cell
- b. Plant cell
- c. Bacterial cell
- d. Fungal cell

30. Which state of matter has a definite shape and definite volume?

- a. Solid
- b. Liquid
- c. Gas
- d. Plasma

31. Based on the table below, which substance requires the highest temperature to melt (solid to liquid)?

Substance	Melting Point (°C)
Ice	0°C
Wax	60°C
Lead	327°C
Gold	1064°C

- a. Ice
- b. Wax
- c. Lead
- d. Gold

32. What happens to the molecules of a solid when it is heated?

- a. The molecules move slower.
- b. The molecules stay in one place.
- c. The molecules move faster.
- d. The molecules change into atoms.

33. Which instrument is used to measure mass?

- a. Stopwatch
- b. Weighing balance
- c. Measuring tape
- d. Thermometer

34. A rope of 2.5 meters is cut into 5 equal parts. What is the length of each part?

- a. 0.5 m
- b. 1 m
- c. 2 m
- d. 2.5 m

35. Which of these devices can be used to measure time during an experiment?

- a. Barometer b. Stopwatch c. Vernier calliper d. Spring balance

36. If the volume of water in a measuring cylinder rises from 50 mL to 80 mL after submerging a stone, what is the volume of the stone?

- a. 50 mL b. 80 mL c. 30 mL d. 130 mL

37. Which of the following forces is a non-contact force?

- a. Frictional force b. Gravitational force
c. Muscular force d. Normal force

38. You place a toy car on a sloped surface and observe its motion. What conclusion can you draw based on the observation?

- a. Friction opposes motion on a slope.
b. Gravity pulls the car downward.
c. Balanced forces act on the car.
d. The car moves due to air pressure.

39. Why is it easier to move a suitcase with wheels compared to the one without wheels?

- a. Wheels reduce friction.
b. Gravity acts only on dragging.
c. Air pressure decreases with wheels.
d. The suitcase becomes lighter with wheels.

40. You observe your shadow is shorter at noon and longer in the evening. What is the reason for this?

- a. The light source moves closer to you at noon.
b. The angle of the Sun changes during the day.
c. Shadows do not depend on the Sun's position.
d. Shadows disappear at noon.

41. The following table shows the light transmission properties of various materials:

Material	Property
Glass	Transparent
Frosted Glass	Translucent
Wood	Opaque
Plastic Wrapper	Translucent

If a beam of light falls on each material, which one will allow maximum transmission without scattering or absorption?

- a. Frosted Glass b. Glass c. Wood d. Plastic Wrapper

42. Why should you avoid looking directly at the Sun, even with sunglasses?

- a. It reduces visibility temporarily.
b. It can damage your eyes permanently.
c. It can make shadows disappear.
d. It makes light too bright to bear.

43. Which of the following materials is a conductor of electricity?

- a. Plastic b. Rubber c. Copper d. Wood

44. What would happen if a copper wire were replaced with a plastic wire in a circuit?

- a. The circuit will work better.
- b. The circuit will stop working.
- c. The bulbs will glow dimmer.
- d. Nothing will change.

45. Why should you avoid touching electrical appliances with wet hands?

- a. To prevent the appliance from getting dirty
- b. To avoid the risk of electric shock
- c. To save electricity
- d. To keep the appliance dry

46. What are the two poles of a magnet called?

- a. North and East
- b. North and West
- c. North and South
- d. East and West

47. If you cut a bar magnet into two pieces, what happens to the poles?

- a. Each piece has only one pole.
- b. Each piece becomes a complete magnet with two poles.
- c. The poles disappear.
- d. The magnet stops working.

48. Which of the following is NOT a type of simple machine?

- a. Lever
- b. Pulley
- c. Inclined plane
- d. Generator

49. What is the primary purpose of a wedge?

- a. To lift objects
- b. To split or cut materials
- c. To reduce friction
- d. To measure force

50. If a child wants to lift a bucket from a well but cannot, which simple machine would help them the most?

- a. Wedge
- b. Pulley
- c. Inclined plane
- d. Lever

