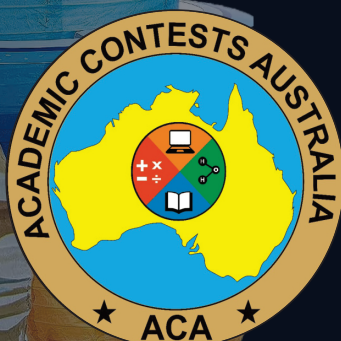




QUESTION BOOKLET 2025



International
FSP



Science Contest Volume-19



GRADE 5 & 6

VIBRANT YOUNGSTERS

Time Allowed : 90 Minutes
Maximum Marks : 90

WRITTEN DIRECTIONS FOR THE CONTEST

- 1) Wait till the invigilator gives the all-clear before beginning the contest.
- 2) Examine your name, father's name, school name, address, and other details one last time on the bubble sheet and answer page.
- 3) Only record your responses on the bubble sheet. Choose the best response from the four alternatives provided, and only one option should be marked per question.
- 4) Fill in the circles on the bubble sheet with blue or black ink; lead pencils are not permitted.
- 5) It is completely forbidden to use any kind of assistance, including cell phones and technological devices.
- 6) Three points are awarded for each right response. Negative marking would occur. A single point would be subtracted for each wrong response.
- 7) No justification may be given for an unaccompanied candidate to leave the examination room, including to use the restroom.
- 8) No objects, including electrical devices, are allowed within the room.
- 9) The competition is divided into the following five categories:
 - A) Vibrant youngsters Grade 1 & 2
 - B) Vibrant youngsters Grade 3 & 4
 - C) Vibrant youngsters Grade 5 & 6
 - D) Vibrant youngsters Grade 7 & 8
 - E) Vibrant youngsters Grade 9 & 10 / 0-levels
- 10) The contest is only open to enrolled students.
- 11) No candidate may remove any provided materials, including answer books, from the hall, even if they are partially filled in or utilized.
- 12) Neither the examiner nor the invigilator may respond if a participant does not understand a word or phrase on the exam paper.
- 13) Please visit www.fspcompetitions.org to learn about future competitions or to offer insightful comments.
- 14) Vibrant youngsters FSP must receive reports of any academic misconduct or malpractice at info@fspcompetitions.org.

Q 1. Read the passage and answer the question below:

A river flows downstream towards the sea. Nearby, there is a factory that sometimes releases waste into the river, and a farm that uses pesticides. A water treatment plant will be built to supply clean water to homes. The plant will treat water taken from the river.

Where should the water treatment plant be placed to ensure clean water?

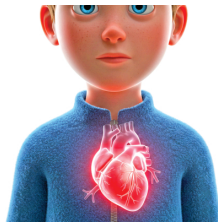
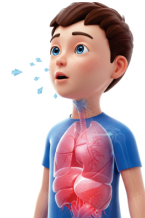
- A** Upstream, before the factory and farm
- B** Downstream, after the factory
- C** In the middle of the river
- D** Near the sea



Q 2. Romah and her family were enjoying a day at the beach when dark clouds gathered, and the temperature dropped. Romah started to shiver and get goosebumps.

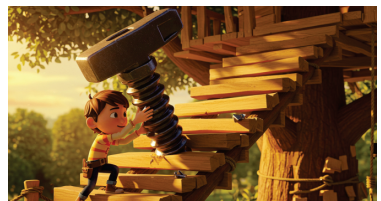
Which organ detected the temperature change?

- A** Skin
- B** Lungs
- C** Heart
- D** Muscles



Q 3. Some children are trying to get supplies into their treehouse. Which simple machine would be most useful?

- A** Lever
- B** Screw
- C** Wheel and axle
- D** Pulley



Q 4. Ayesha sets up an experiment where she places ice cubes in a bowl covered with a material. After 10 minutes, the ice is still there.

Which material is covering the bowl?

- A** Plastic
- B** Cotton
- C** Metal
- D** Glass

Q 5. Which of the following is a non-renewable resource?

- A** Solar power
- B** Wind power
- C** Water power
- D** Gas power

Q 6. Three gears are connected. When gear Y turns, what happens to gears X and Z?

- A** X and Z move in the same direction as Y
- B** X and Z move in opposite directions
- C** Only X moves, Z stays still
- D** X and Z do not move

Q 7. Which of these plants is grown by a different method than the others?

- A** Rose
- B** Potato
- C** Sugarcane
- D** Wheat

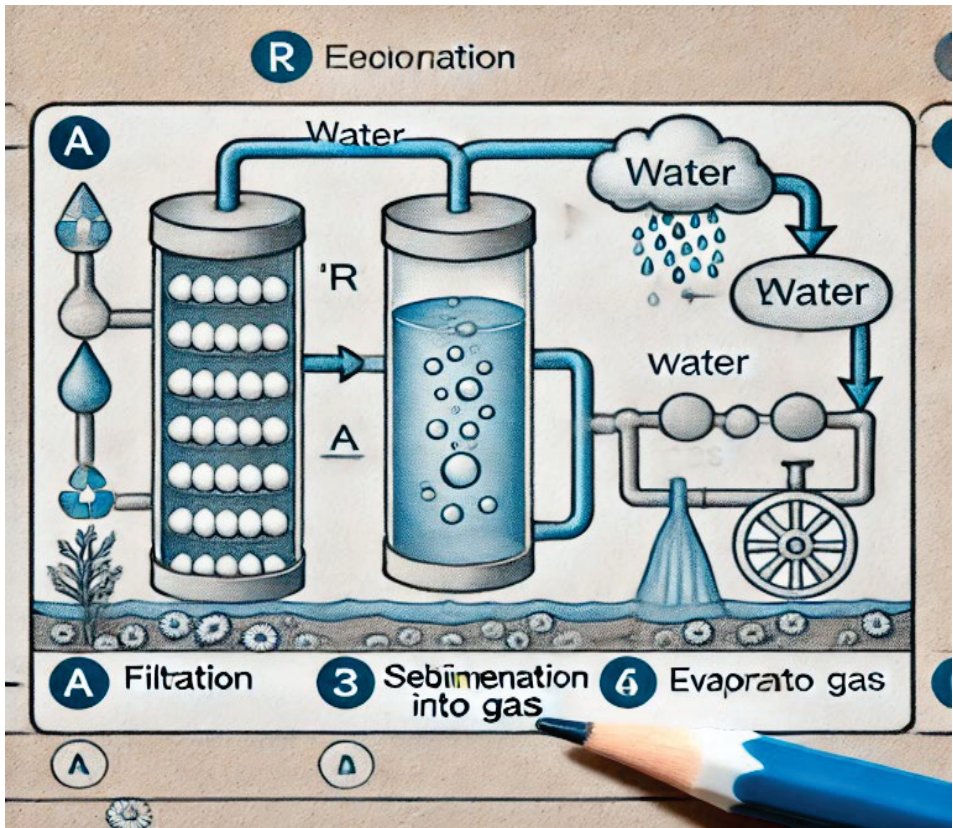


Q 8. What happens when a glass of ice and a glass of cooking oil are tilted?

- A** Both liquids pour out at the same speed
- B** Ice and oil mix together
- C** Cooking oil turns into a solid
- D** Ice moves slower than cooking oil



Q 9. The diagram below shows a water purification process. What is happening in step R?



- A** Water is evaporating into gas
- B** Water is turning into ice
- C** No change is happening
- D** The water is mixing with other substances

Q 10. Maryam is testing which objects are magnetic. Which of these is NOT attracted to a magnet?

- A** Iron nail
- B** Paper clip
- C** Plastic ruler
- D** Steel pin

Q 11. Why are stone pebbles placed around trees in cities instead of concrete?

- A** To support the tree roots
- B** To make the tree look neat
- C** To catch falling leaves
- D** To allow air and water to reach the roots

Q 12. A game of tug-of-war is played between boys and girls. The boys pull one way, and the girls pull the other way.

What is the direction of the opposing force?

- A** Toward the girls
- B** Away from the girls
- C** Toward the boys
- D** In the direction of the strongest team

Q 13. Sania made a list of voluntary and involuntary actions. Which of these is an involuntary action?

- A** Beating of the heart
- B** Chewing food
- C** Singing a song
- D** Sitting upright

Q 14. In winter, people rub their hands together to generate heat. What causes this?

- A** The hands absorb heat from the air
- B** Friction between the hands produces heat
- C** The muscles inside the hands warm up
- D** Blood circulation speeds up

Q 15. Study the food chains below:

1. Grass → Goat → Human
2. Leaves → Giraffe → Lion
3. Papaya → Fruit fly → Lizard

Which statements are correct about food chains?

- A** Food chains always start with a plant
- B** Animals only eat other animals
- C** Carnivores are at the beginning of food chains
- D** Food chains end with plants

Q 16. Which of these comparisons between solids and liquids is **INCORRECT**?

- A** Solids have a definite shape, liquids do not
- B** Liquids flow, solids do not
- C** Liquids have a definite volume
- D** Solids take the shape of their container

Q 17. A can of soda is left open. Over time, its weight changes. Why?

- A** The soda becomes heavier
- B** Carbon dioxide gas escapes, making it lighter
- C** The metal of the can evaporates
- D** The soda inside turns into ice

Q 18. A smart traffic light system uses sensors to count cars. However, in bad weather, the sensors fail.

Which solution is **BEST** to solve this issue?

- A** Upgrade the sensors
- B** Use cameras to count cars
- C** Use both cameras and GPS data for better accuracy
- D** Only use GPS data

Q 19. Which gas is produced by plants during photosynthesis?

- A** Oxygen
- B** Carbon dioxide
- C** Hydrogen
- D** Water vapor

Q 20. Which of the following will NOT cause water pollution?

- A** Throwing garbage into rivers
- B** Dumping chemicals into lakes
- C** Releasing untreated sewage into oceans
- D** Using recycled water for cleaning

Q 21. A scientist studies how different materials decompose. Which statement is TRUE?

- A** Dry objects decompose faster
- B** Sunlight is required for decomposition
- C** Decomposers grow better in damp conditions
- D** Decomposition happens faster in dry areas

Q 22. Which material would be best for keeping cooked food warm in a box?

- A** Metal fork
- B** Wooden spoon
- C** Insulated container
- D** Plastic bag

Q 23. Mr. Gulzar sees his shadow while walking at night. What happens as he moves closer to a streetlight?

- A** His shadow gets shorter
- B** His shadow gets longer
- C** His shadow disappears
- D** His shadow changes color

Q 24. Ahmad compares the mass of three fruits. Which statement is NOT possible to determine?

- A** The apple is heavier than the orange
- B** The orange and pear have the same mass
- C** The apple and orange have the same volume
- D** The pear is lighter than the apple

Q 25. The Moon changes shape throughout the month. What causes this?

- A** The Earth's shadow moving across the Moon
- B** The Moon orbiting around the Earth
- C** The Sun moving around the Moon
- D** Clouds covering parts of the Moon

Q 26. Which of the following statements about energy transfer in a food chain is TRUE?

- A** Grass produces energy for all animals
- B** There are always more lions than antelopes
- C** The Sun is the primary energy source in all food chains
- D** Energy flows backward in a food chain

Q 27. A scientist is classifying materials into two groups:

Group X: Styrofoam, Wooden Chopstick, Rubber Duck

Group Y: Metal Coin, Ceramic Bowl, Glass Marble

What are the best category labels for these groups?

- A** Group X: Floats on water, Group Y: Sinks in water
- B** Group X: Natural, Group Y: Man-made
- C** Group X: Transparent, Group Y: Opaque
- D** Group X: Flexible, Group Y: Stiff

Q 28. Which road sign should be placed near a hospital to ensure safety?

- A** No honking
- B** Slippery road
- C** School zone
- D** Speed limit 100 km/h

Q 29. What is the correct phase of the Moon 5 days after a full moon?

- A** Waning gibbous
- B** Waxing crescent
- C** New moon
- D** First quarter



Q 30. Rehan, Ali, Dua, and Rida are discussing a grassland ecosystem:

Rehan: The Sun is the main source of energy for all organisms.

Ali: Grass is more abundant than antelopes because antelopes need grass to survive.

Dua: There are more lions than antelopes because lions eat antelopes.

Rida: If all the grass disappeared, only the antelopes would be affected.

Who is correct?

A Rehan, Ali, and Dua

B Only Rehan

C Ali and Rida

D All of them



ANSWER SHEET

GRADE 5 & 6

Q.NO ANSWER

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Q.NO ANSWER

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International FSP Vibrant Youngsters Contests

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