



## CREST Science Olympiad (CSO)

Previous Year Paper (2023-24)

**Class 5 (Set - A)**

**Time Allowed: 1 hour**

**Maximum Marks: 60**

- Additional **10 minutes** will be allotted to fill up information on the OMR Sheet, before the start of the exam.
- Fill in all the mandatory fields clearly on the OMR Sheet.
- There are a total of **50 questions** in this booklet comprising **2 sections** namely the **Practical Science & Achievers' Section** consisting of **40 questions (1 mark each) & 10 questions (2 marks each)** respectively.
- There is no negative marking. The use of a calculator is not permitted.
- There is **only ONE correct option** to a given question.
- Use **HB Pencil / Ball point pen (Blue / Black) only** for marking the correct choice of answers on the OMR Sheet.
- Rough work is to be done in the space provided in the test booklet. Extra plain sheet may be provided by the school for the rough work.
- The OMR Sheet is to be handed over to the invigilator at the end of the exam.
- No candidate is allowed to carry any textual material, printed or written, bits of paper, any electronic device, digital watches, etc. inside the examination hall.
- The use of unfair means may result in the cancellation of the exam. Any such instances must be reported at **+91-98182-94134** or **info@crestolympiads.com**

**DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO**

**FILL IN THE DETAILS**

Candidate Name: \_\_\_\_\_

Class: \_\_\_\_\_ Section: \_\_\_\_\_

CREST ID: \_\_\_\_\_

## Practical Science (Each Question is 1 Mark)

1. Sara, Jasper and George were studying for their exam and this is what they told their mother about force:

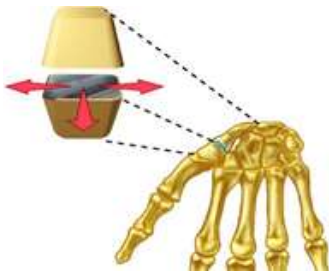
**Sara:** Friction makes it hard to slide heavy objects across the floor.

**Jasper:** Force cannot change the shape and size of an object.

**George:** A force can change the direction of a moving object.

Who among them made the wrong statement?

- a. Only George
  - b. Only Sara
  - c. Only Jasper
  - d. All three were wrong
2. Read the following clues about the joint shown below and identify the joint:  
Clue 1: This joint permit two or more round or flat bones to move freely together without any rubbing or crushing of bones.  
Clue 2: The lower leg to the ankle joint and the forearm to wrist joint are the two main examples of this joint.



- a. Hinge joint
  - b. Ball and socket joint
  - c. Gliding joint
  - d. Pivot joint
3. Match the column I with the column II and select the correct option:

Column I		Column II	
1.	Hydrilla	a.	Insectivorous plant
2.	Sundew	b.	Aquatic plant
3.	Pine	c.	Cereal grass
4.	Wheat	d.	Needle-like leaves

- a. 1 - a, 2 - b, 3 - c, 4 - d
- b. 1 - b, 2 - a, 3 - d, 4 - c
- c. 1 - b, 2 - a, 3 - c, 4 - d
- d. 1 - b, 2 - d, 3 - c, 4 - a

4. The figure below shows the shape of the moon in the night sky. What is the phase of the moon at this time?



- a. Half-moon
  - b. Full moon
  - c. Crescent moon
  - d. Gibbous moon
5. Which of the following is an example of chemical energy getting converted to thermal energy?
1. Lightning
  2. Burning gasoline in a car's engine
  3. Stretched rubber band
  4. A person riding a bicycle down the hill
  5. A car crash
  6. Tearing a paper
- a. 1 and 3
  - b. 4 and 5
  - c. Only 6
  - d. Only 2
6. What is the similarity seen between the two plants shown below?



**Sugarcane**



**Bamboo**

- Both have taproots.
- Both are desert plants.
- Both require a very hot and dry climate to grow.
- Both are giant grasses.

7. State whether the following statements are true or false related to natural resources:

- They can never be exhausted.
- They are obtained from soil only.
- Non-mineral resources include air and water.

- 1-True, 2-True, 3-True
- 1-False, 2-False, 3-False
- 1-True, 2-True, 3-False
- 1-False, 2-False, 3-True

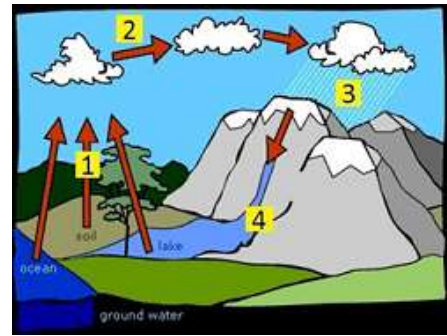
8. Consider the following statements and choose the correct option:

- Planet Venus is the second hottest planet of our solar system.
- Mars is one of just two planets that rotate from east to west.

- Statement 1 is correct but statement 2 is incorrect
- Statement 1 is incorrect but statement 2 is correct
- Both 1 and 2 are correct
- Both 1 and 2 are incorrect

9. Observe the picture of the water cycle shown below:

Condensation and precipitation process is taking place at \_\_\_\_\_ and \_\_\_\_\_ stages respectively.



- 1 and 2
- 2 and 3
- 3 and 4
- 1 and 4

10. Read the clues given below about a fascinating animal and identify it correctly:

Clue 1: It is a mammal.

Clue 2: It has a bill or a beak like a duck and lays eggs as birds do.

Clue 3: It nurses its young ones with milk as do other animals.

- Shrew
- Platypus
- Whale
- Kangaroo

11. Robert wrote two statements about the human body in her notebook:

- The cerebrum is in charge of thinking and memory.
- The part of the brain in charge of involuntary actions such as breathing, heartbeat, etc., is the cerebellum.

Choose the correct option regarding the above two statements:

- Statement 1 is correct but statement 2 is incorrect
- Statement 1 is incorrect but statement 2 is correct
- Both the statements are correct
- Both the statements are incorrect

12. The picture given below shows a stage X in the life cycle of an organism called the pupa stage. Which of the following organism will come out in the next stage of development?



- a. Butterfly                      b. Mosquito  
c. Cockroach                      d. Frog

13. State whether the following statements are true or false:

1. Sandy soil has very low nutrients and poor water holding capacity, which makes it hard for the plant's roots to absorb water.
2. Clayey soil is best suited for plant growth.

- a. 1-False, 2-False  
b. 1-True, 2-True  
c. 1-False, 2-True  
d. 1. True, 2-False

14. What do dolphins and turtles have in common in terms of their movement in the water

- i. Forelimbs are modified as flippers that act as paddles and help to swim.
- ii. Both have webbed feet.
- iii. The soft pad underneath their limbs.



- a. Only i                              b. Only ii  
c. Only ii                              d. i, ii and iii

15. The rock shown below is used to make cutting tools. Identify the rock:



- a. Pumice                              b. Diamond  
c. Sandstone                              d. Obsidian

16. Identify the process of change of matter which is depicted by the picture below:



- a. Evaporation                      b. Sublimation  
c. Condensation                      d. Crystallisation

17. State whether the following statements are true or false.

1. Seesaw and scissors belong to the different class of lever.
2. In a third-class lever, the effort is located between the load and the fulcrum.

- a. 1-False, 2-False  
b. 1-False, 2-True  
c. 1-True, 2-True  
d. 1-True, 2-False

18. Which of the following pair are an INCORRECT match?

1. Asteroids are found between - Mercury and Venus
2. Shooting stars – Meteors
3. A celestial body that revolves around a planet – Satellite
4. Group of stars forming recognisable shape – Asteroids
5. The farthest planet in the solar system - Neptune

- a. 2 and 3                              b. 3 and 4  
c. 5 and 1                              d. 1 and 4

19. Identify the similarity between the pictures shown below:



Formation of Clouds      Melting of Ice

- a. Both are reversible chemical changes.
- b. Both are irreversible physical changes.
- c. Both are irreversible chemical changes.
- d. Both are reversible physical changes.

20. Spot the similarity between the two animals shown below:



- a. Both are amphibians.
- b. Both are found in the desert region.
- c. Both are reptiles.
- d. Both are mammals.

21. Complete the sentence below:  
When water starts boiling, bubbles are formed on the sides of the vessel. This shows that \_\_\_\_\_.

- a. dissolved solids separate from water on heating
- b. dissolved liquids separate from water on heating
- c. dissolved gases separate from water on heating
- d. dissolved solute separate from the solvent on heating

22. State whether the following statements are true or false:

1. If we push a mug or piece of wood in a bucket filled with water, we can feel an upward push.
2. Friction enables us to apply brakes and slow down or stop a moving car.

- a. 1-False, 2-True
- b. 1-False, 2-False
- c. 1-True, 2-True
- d. 1-True, 2-False

23. See the picture below and identify the force that leads to warmth when we rub our hands together:



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

24. Read the passage below and identify X and Y correctly:

As the earth rotates, it also moves around the sun in a fixed path. This fixed path in which earth moves around the sun is called X. Movement of the earth around the sun in its fixed X is called Y. Earth takes one year to complete one Y.

- a. X - Orbit, Y - Revolution
- b. X - Rotation, Y - Orbit
- c. X - Orbit, Y - Rotation
- d. X - Equator, Y - Path

25. The figure below shows a tweezer. In this, the effort is \_\_\_\_\_.



- a. zero
- b. between the fulcrum and the load
- c. to be applied on the fulcrum
- d. located on the left side of the fulcrum and the load

26. Read the two statements given below and select the correct option:

**Statement 1** - Natural causes of air pollution are forest fires and volcanic

eruptions.

**Statement 2** - Man-made causes of air pollution are deforestation, burning of fossil fuels, smoke from factories etc.

- a. Both the statements 1 and 2 are correct
- b. Both the statements 1 and 2 are incorrect
- c. Statement 1 is correct but statement 2 is incorrect
- d. Statement 1 is incorrect but statement 2 is correct

**27.** Which of the following are the after-effects of earthquakes?

- 1. Bursting of crackers
- 2. Extreme shortage of water
- 3. Loss of life
- 4. Cracked roads and collapse of buildings
- 5. Collapse of communication system
- 6. Acid rain

- a. 1, 2 and 3      b. 4, 5 and 6
- c. 3, 4 and 5      d. All six

**28.** Diya wrote two statements on the blackboard about animals:

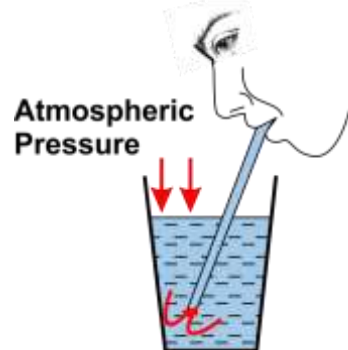
- 1. Birds and reptiles in the desert retain water as their metabolic wastes are excreted in the form of an insoluble white compound called uric acid.
- 2. Bison living in grasslands have broad, flat-topped teeth and digestive systems especially adapted to feed on grasses.

Choose the correct option about the above two statements:

- a. Statement 1 is correct but statement 2 is incorrect
- b. Statement 1 is incorrect but statements 2 is correct
- c. Both the statements are correct
- d. Both the statements are incorrect

**29.** Choose the correct option and complete the sentence below:

The picture below shows a boy sucking in air through the straw. The water goes up the straw because the air pressure inside the straw \_\_\_\_\_.



- a. is the same as that in water
- b. is less than that in water
- c. is greater than that in water
- d. None of these

**30.** Match the column I with the column II and select the correct option:

Column I		Column II	
1.	Night blindness	a.	Disease caused due to the deficiency of Vitamin D
2.	Beriberi	b.	Disease caused due to the deficiency of Vitamin C
3.	Scurvy	c.	Disease caused due to the deficiency of Vitamin B
4.	Rickets	d.	Disease caused due to the deficiency of Vitamin A

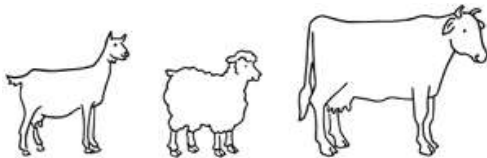
- a. 1 - d, 2 - c, 3 - b, 4 - a
- b. 1 - b, 2 - a, 3 - d, 4 - c
- c. 1 - a, 2 - b, 3 - c, 4 - d
- d. 1 - d, 2 - c, 3 - a, 4 - b

**31.** What is the difference between palm trees and cedar trees in terms of their habitat as shown below?



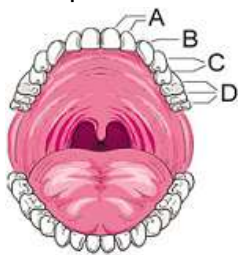
- Palm trees grow in marshy areas whereas cedar trees are found in plain regions.
- Palm trees grow in cold regions whereas cedar trees grow in marshy areas.
- Palm trees grow in hilly areas whereas cedar trees grow in deserts.
- Palm trees grow in deserts whereas cedar trees grow in hilly areas.

32. What do animals like cows, goats and sheep have in common?



- They are ruminants.
- They are omnivores.
- They are predators.
- They have sharp tearing teeth.

33. Unscramble and identify the name of the labelled part D of the teeth:



- |             |              |
|-------------|--------------|
| a. NSOICRSI | b. APRMLOSER |
| c. LRMSOA   | d. NACESIN   |

34. State whether the following statements are true or false:

- Mercury is the coldest planet of our solar system.
- As the moon revolves around the earth, different parts of its surface get illuminated and we see a different shape every day.

- 1-True, 2-True
- 1-False, 2-False
- 1-True, 2-False
- 1-False, 2-True

35. Three students gave the following statements in a classroom discussion:

**Arya:** Most of the insects such as butterflies, grasshoppers, cockroaches and houseflies lay eggs.

**Susan:** When the baby bird hatches from the egg, they always have feathers.

**Molly:** Small baby cockroach or grasshopper that hatches from the egg is called a nymph.

Which student(s) made an incorrect statement(s)?

- Arya and Susan
- Suan and Molly
- Molly only
- Susan only

36. Read the clues given below and identify the method of separation correctly:

Clue 1: A soluble substance is separated from its solution by this method.

Clue 2: Salt is separated from saltwater solution by this method.

Clue 3: The water or solvent goes into the air and the solute is left behind.

- CONDENSATION
- SEDIMENTATION
- EVAPORATION
- FILTRATION

37. Which one of the following statements is false?

- To stop a moving body, the applied force should be greater than the force by which the body is moving.
- Energy is the capacity to do work.

- c. An example of a renewable source of energy is fossil fuel.
- d. Levers are commonly used tools like scissors, hammers and screwdrivers.

38. Which of the following represents condensation?
- a. Drying of wet clothes
  - b. Melting of glacial ice
  - c. Hardening of molten chocolate in a refrigerator
  - d. Accumulation of water droplets on a cold bottle

39. Fill in the blanks:

When animals and human beings \_\_\_1\_\_\_, they exhale carbon dioxide and inhale oxygen. The carbon dioxide exhaled by them is inhaled by the

plants during the process of \_\_\_2\_\_\_. By this process, plant release \_\_\_3\_\_\_ into the atmosphere.

- a. 1 - respire, 2 - photosynthesis, 3 - oxygen
- b. 1 - respire, 2 - transpiration, 3 - carbon dioxide
- c. 1 - breathe, 2 - respiration, 3 - carbon dioxide
- d. 1 - breathe, 2 - photosynthesis, 3 - carbon dioxide

40. Which of the following joint enables a bowler to bowl a ball in a cricket match?

- a. Hinge joint of elbow
- b. Hinge joint at shoulder
- c. Ball and socket joint at shoulder
- d. Ball and socket joint at elbow

## Achievers' Section (Each Question is 2 Marks)

41. Based on the table given below, Choose the correct option:

Inexhaustible Natural Resource	Exhaustible Natural Resource
Rainfall	Coal
A	B

- a. Solar energy, Petroleum
  - b. Iron, Wind
  - c. Petroleum, Forests
  - d. Clay, Solar energy
42. Seed leaves are called cotyledons. Cotyledons store food for the baby plant before the baby plant starts making its own food. Spot the seeds from below that have two cotyledons:
1. Wheat
  2. Maize
  3. Beans
  4. Rice
  5. Peas

6. Coconut

- a. 3 and 5
- b. 1 and 2
- c. 4 and 6
- d. 2 and 3

43. Given below are two groups of simple machines. On what basis have they been grouped?



**Group 1**



**Group 2**

- a. Group 1 - These are examples of screw.  
Group 2 - These are examples of wedge.
- b. Group 1 - These are examples of pulley.



Group 2- These are examples of wheel and axle.

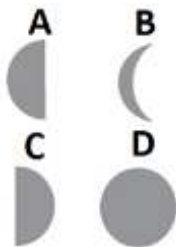
- c. Group 1 - These are examples of wheel and axle.

Group 2- These are examples of pulley.

- d. Group 1 - These are examples of lever.

Group 2 - These are examples of inclined plane.

44. Observe the image below carefully:  
Let the first day of the month be a New Moon Day. Which phase of the moon would represent the fifteenth day of the same month?

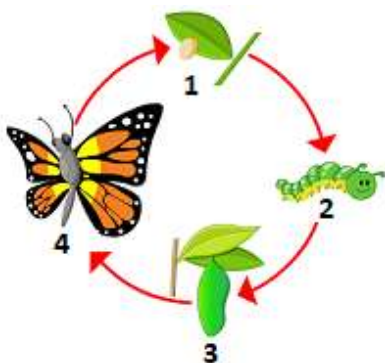


- a. A                                      b. B  
c. C                                      d. D

45. Read the passage given below carefully:  
Plant X lives in water and is called water plant or hydrophyte. It floats freely on the water surface and is not attached to the bottom soil.  
Identify X correctly:

- a. Water lily                              b. Hydrilla  
c. Lotus                                      d. Pistia

46. Given below is the image showing the life cycle of a butterfly.  
Identify the four stages of the life cycle of the butterfly:



- a. 1 - Nymph, 2 - Egg, 3 - Adult, 4 - Larva  
b. 1 - Egg, 2 - Larva, 3 - Pupa, 4 - Adult  
c. 1 - Pupa, 2 - Egg, 3 - Larva, 4 - Butterfly  
d. 1 - Larva, 2 - Pupa, 3 - Egg, 4 - Butterfly

47. Given below are pairs of simple machines. Select the pair(s) that belongs to the same type of simple machine:

P: Hammer and Doorknob  
Q: Nail and Bolt  
R: Skateboard ramp and Stairs  
S: See-saw and Clothesline

- a. Only S  
b. Only R  
c. Both P and Q  
d. Both Q and R

48. Which of the following is/are the correct match?

X: Vegetative propagation through stems - Potato and ginger  
Y: Vegetative propagation by leaves - Bryophyllum and sugarcane  
Z: Spores reproduction - Mushrooms and ferns

- a. Only X  
b. Only Y  
c. Only Z  
d. Both X and Z

49. In which of the following, odd one (sources of vitamin/mineral) is underlined correctly:

M: Rice, Eggs, milk, cheese  
N: Milk, cheese, turnip, yogurt  
O: Fish, crabs, salt and prawns  
P: Spinach, cabbage, meat and liver

- a. N only  
b. M only  
c. Both P and O  
d. Both M and O

50. Read the following statement and choose the correct option:
- I. A snail moves with the help of its muscular foot.
  - II. The vertebral column of a man has a greater number of vertebrae than that of a woman.
  - III. At the time of birth, a human baby has a greater number of bones than an adult.

- IV. Joint present in the upper jaw of the skull is freely movable.
- a. I and II are correct
  - b. I and III are correct
  - c. II and III are correct
  - d. II and IV are correct

## Answer Key

1.	c	2.	c	3.	b	4.	d	5.	d	6.	d	7.	d
8.	d	9.	b	10.	b	11.	a	12.	a	13.	d	14.	a
15.	d	16.	c	17.	b	18.	d	19.	d	20.	d	21.	c
22.	c	23.	b	24.	a	25.	b	26.	a	27.	c	28.	c
29.	b	30.	a	31.	d	32.	a	33.	c	34.	d	35.	d
36.	c	37.	c	38.	d	39.	a	40.	c	41.	a	42.	a
43.	b	44.	d	45.	d	46.	b	47.	b	48.	d	49.	a
50.	b												