



CREST Science Olympiad (CSO)

Previous Year Paper (2023-24)

Class 4 (Set - A)

Time Allowed: 1 hour

Maximum Marks: 45

- 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 **35 questions** in this booklet comprising **2 sections** namely the **Practical Science & Achievers' Section** consisting of **25 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

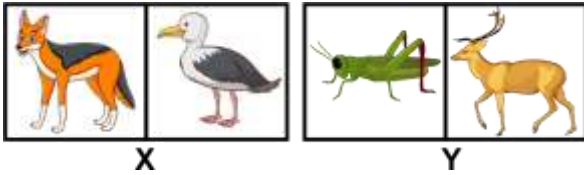
Candidate Name: _____

Class: _____ Section: _____

CREST ID: _____

Practical Science (Each Question is 1 Mark)

1. Given below are pictures of two groups of animals. On what basis have they been grouped?



- a. Group X: These animals are decomposers.
Group Y: These animals are arboreal.
- b. Group X: These animals can merge with the surroundings to escape from their enemies.
Group Y: These animals are scavengers.
- c. Group X: These animals are found in plains.
Group Y: These animals are found in mountain regions.
- d. Group X: These animals are scavengers.
Group Y: These animals merge with the surroundings to escape from their enemies.
2. In which of the following processes is heat lost?
- A. Ice melting into water
B. Water freezing into ice cubes
C. Steam condensing into water droplets
D. Water vapour turning into dew drops
- a. A only b. A, B and C
c. B, C and D d. A, B, C and D
3. Deserts are very hot and there is very little rainfall in these places. Which of these plants is most likely to be from a desert region?
- a. Prickly pear b. Teak
c. Cedar d. Banyan

4. Select the action which involves a force that is different from the other three:

- a. A glass falls down on the floor.
b. Stretching a rubber band with fingers.
c. Water flows downhill.
d. Leaves falling down on the ground.

5. Consider the picture of the main parts of a grasshopper as shown in the diagram and fill in the blank:
All insects have small breathing holes called _____. Insects breathe through them and not through their mouth or nose.



- a. wings b. antennae
c. abdomen d. spiracles

6. Rachel performed two experiments at home with paper. They are:
1. She crumpled a white sheet of paper to make a ball.
 2. Then she burnt the paper completely into ashes.

What can we say about the type of changes that took place in the above two experiments?

- a. 1 can be reversed whereas 2 cannot be reversed
b. 1 cannot be reversed whereas 2 can be reversed
c. Both 1 and 2 cannot be reversed
d. Both 1 and 2 are can be reversed
7. Look at the picture given below that shows various clothing. Spot the similarity between these pictures:



- a. They are worn in the summer season.
- b. They are worn in the winter season.
- c. They all protect us from insect bites.
- d. They are worn in the rainy season.

8. Choose the INCORRECT statement from below related to taking care of animals:

- a. Rare animals are allotted reserved areas where they can live in unnatural surroundings called the zoo.
- b. Animals should be vaccinated against harmful diseases.
- c. Sheep shearing is avoided in the winters so as to allow the sheep to keep itself warm with its thick coat of hair.
- d. All of the above

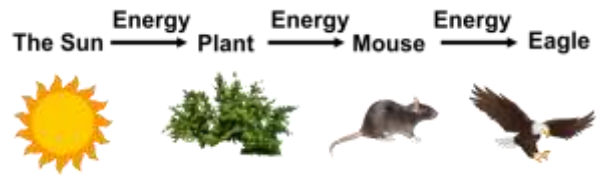
9. Look at the pictures of the animals shown below and spot the similarity between them related to the type of teeth they possess:



- a. They have sharp, biting teeth in front.
- b. They have sharp and pointed tearing teeth.
- c. They have only biting teeth.
- d. They have only strong, grinding teeth.

10. Study the food chain below.

The energy from the Sun is passed on from one living thing to another. The food chain shows that the energy from the Sun is gained by the _____.



- a. eagle when it eats the plant
- b. mouse when it eats the plants
- c. mouse when the eats the eagle
- d. plant when the eagle eats the mouse

11. What is the similarity seen in the group of plants as written below?

Pepper, Coriander, Cardamom, Cumin

- a. They are all medicinal plants.
- b. These are plant products which are used as spices to cook food.
- c. We eat the leaves of these plants.
- d. We eat the roots of these plants.

12. Read the clues given below and identify the vitamin correctly:

Clue 1: We get this through food and sunlight.

Clue 2: Deficiency of this vitamin causes weak bones and bone pain.

Clue 3: It helps the body use calcium from the diet.

- | | |
|--------------|----------------|
| a. Vitamin C | b. Vitamin D |
| c. Vitamin A | d. Vitamin B12 |

13. Carefully observe the pictures shown below:

What type of roots do these plants have?



- a. Fibrous roots b. Tap roots
- c. Layered roots d. Aerial roots

14. When a person speaks into a telephone, sound energy is changed mostly into which form of energy?

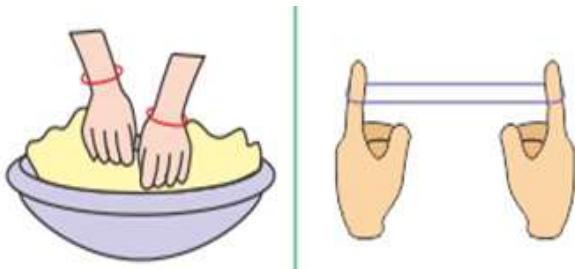
- a. Heat energy
- b. Light energy
- c. Electrical energy
- d. Chemical energy

15. Which of the following are the functions of the stem?

1. Conduction of water and minerals from leaves to the roots.
2. Anchoring the plant firmly into the soil by binding with soil particles.
3. Keeping the plant upright.
4. Conduction of water and minerals from roots to the other parts of the plant.

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

16. Observe the pictures below and identify the effect of force from the given options:



- a. Force can change the speed of the moving object.
- b. Force can change the shape of the object.
- c. Force can change the direction of the moving object.
- d. Force can bring a moving object to rest.

17. Matter can change from one state to another. Observe the figure shown below and identify the process involved in the change of state in the matter:



Water

Ice

- a. Freezing b. Melting
- c. Condensation d. Evaporation

18. Study the given combination. Which amongst these can be 'X'?

Reduce friction: Polishing :: Increase friction: X

- a. Adding rubber tube on cricket bat handles
- b. Using a lubricant
- c. Using ball bearings
- d. Streamlined shape of aeroplanes

19. Complete the pattern given below correctly:

Digestion of carbohydrates : Mouth ::
 Digestion of proteins : _____

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

20. Kate was asked to make a sugar solution for her science practical class. She added a teaspoon of sugar to a glass of water. What should Kate do to make sure that sugar gets dissolved faster in the water?

- a. She should transfer the solution in other glass.
- b. She should cool the solution.
- c. She should heat the solution.
- d. She should add some ice cubes in the solution.

21. To avoid food wastage and for long-term use, food items should be preserved. In which of the following

food products, salt is used as food preservatives?

- a. Smoked salmon
- b. Jams
- c. Jellies
- d. Canned food

22. Which of the following adaptations is not shown by plants that grow in mountainous regions?

- a. The trees are tall and straight.
- b. The trees are conical in shape.
- c. They grow close to the ground.
- d. The leaves are broad and fleshy.

23. Read the following clues and identify the fibre:

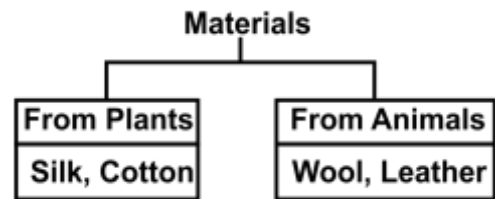
Clue 1: It is a man-made fibre prepared from coal, water and air.

Clue 2: It is lustrous and easy to wash.

Clue 3: It is strong, elastic and light.

- a. Nylon
- b. Jute
- c. Cotton
- d. Wool

24. Which of the following materials is wrongly grouped in the given figure below?



- a. Silk
- b. Wool
- c. Cotton
- d. Leather

25. Choose the correct option and complete the sentence:
Digestion in human beings begins from the mouth. _____ tube moves food from the back of your throat to the stomach. When the food reaches the stomach, _____ juices is mixed with it.

- a. Epiglottis, mucus
- b. Larynx, bile
- c. Oesophagus, gastric juices
- d. Pharynx, saliva

Achievers' Section (Each Question is 2 Marks)

26. Kate took a teaspoon of salt, mixed it in a glass of water and stirred it well. She observed that salt was soluble in water.

State whether the following sentences are true or false:

1. The solid substance which dissolves in a liquid is called a solvent.
2. Salt is a solute and water is a solvent.

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

27. The fur of some animals becomes thicker in the winter and sheds in the

spring. These observations show how animals _____.

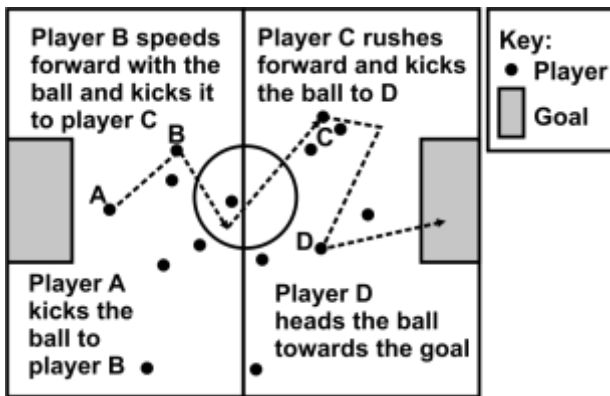
- a. respond to changes in the environment
- b. move from place to place to survive
- c. store fat for the winter
- d. compete with other animals for food

28. How does seed dispersal help plants?

- a. The new plant can grow in the same place as their parents.
- b. The new plant can get more nutrients, light and space to grow.
- c. The new plant will make double the oxygen for the environment.
- d. The new plant will grow more fruit than the older plants if they are spread out.

29. Which of the following statements are correct about liquids?
1. They flow easily.
 2. They have a definite volume but no definite shape.
 3. They are hard.
 4. They cannot be seen.
- a. 3 and 4 only b. 1 and 4 only
c. 1 and 2 only d. 2 and 3 only

30. Study the diagram below which shows how a goal is being scored during a football match between two teams. Which of the following force does not lead to a change in the direction of the ball?



- a. A to B b. B to C
c. C to D d. Both b and c
31. Which of the following statements is/are correct regarding the food item shown below?



- a. It is needed for the growth and repair of tissues in all parts of your body.
- b. It is a good source of vitamin C.
- c. It keeps the gums and teeth healthy.
- d. All of the above

32. Robert grouped animals based on their adaptations but he made a mistake in pairing the animals. Identify the wrong pair:
- a. Louse and Leech
 - b. Chameleon and Sea gull
 - c. Salmon and Monarch butterfly
 - d. None of the above

33. Consider the following statements and choose the correct option:
Statement 1: Meteorites are found mostly in the region between the orbits of Mars and Jupiter.
Statement 2: A comet is a hazy object that moves around the Sun, usually like centre and a tail pointing away from the Sun.

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

34. The cleaning of the forest over a wide area is called deforestation. Which of the following is/are the effects of deforestation?

1. It causes an increase in the temperature of the earth's atmosphere leading to global warming.
2. It causes the frequent flooding of rivers leading to loss of life and property.
3. It affects the water cycle leading to a decrease in rainfall.
4. It leads to the extinction of many wild animals and plants.

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

35. Which of the following statements are correct?

1. Sound energy cannot be converted into other forms of energy but heat energy can.
2. Heat energy can travel in vacuum but sound energy cannot.
3. An electric bulb converts electric energy into heat energy only.

4. Energy can neither be created nor be destroyed, it can only be converted from one form to another.

- a. Only 2 b. Only 3
c. 2 and 4 only d. 1, 2 and 4

Answer Key

1.	d	2.	c	3.	a	4.	b	5.	d	6.	a	7.	a
8.	a	9.	b	10.	b	11.	b	12.	b	13.	b	14.	c
15.	b	16.	b	17.	a	18.	a	19.	b	20.	c	21.	a
22.	d	23.	a	24.	a	25.	c	26.	d	27.	a	28.	b
29.	c	30.	a	31.	d	32.	b	33.	b	34.	d	35.	c