



Stage I



Grades 1-3

CREST Teacher Science Olympiad (CTSO)

Sample Paper

Pattern and Marking Scheme

Stage	Topic/Section	No. of Questions	Marks per Question	Total Marks
For stage I (Grades 1-3)	Practical Science	30	3	90
	Achiever's Section	20	6	120
Grand Total		50		210

The total duration of the exam is 60 minutes.

Note: For every incorrect answer, there's a penalty of 1/3rd of the total marks allotted to that question.

Syllabus

Living and Non-living things, Plants, Animals, Human Body, Good Habits and Safety Rules, Food and Nutrition, Properties of Matter, Natural Resources, Earth and Space Science, Housing and Clothing, Occupations, Light and Shadow, Sound, Force, Human Impact on Our Environment

For more details visit: <https://www.crestolympiads.com/teacher-science-olympiad>

Practical Science (Each Question is 3 Marks)

1. Match the following terms in Column I with those in Column II.

	Column I		Column II
1.	Pine	i.	Aquatic plant
2.	Venus flytrap	ii.	Fungi
3.	Mould	iii.	Insectivorous plant
4.	Hydrilla	iv.	Cold climate

- a. 1 - ii, 2 - iii, 3 - iv, 4 - i
 b. 1 - iii, 2 - iv, 3 - i, 4 - i
 c. 1 - i, 2 - ii, 3 - iii, 4 - iv
 d. 1 - iv, 2 - iii, 3 - ii, 4 - i
2. What is the similarity between the two food items shown below?
1. Both are food storage organs
 2. Both are underground roots
 3. Both are underground stems
 4. Both reproduce through leaves



- a. Only 1 b. Only 2
 c. Both 1 and 2 d. Both 2 and 4
3. Consider the following statements and choose the correct option:
 Statement 1: Leaves are green because they have glucose in them.
 Statement 2: A food chain always begins with an animal.
- a. Statement 1 is correct but statement 2 is incorrect.
 - b. Statement 1 is incorrect but statement 2 is correct.
 - c. Both the statements are correct.
 - d. Both the statements are incorrect.

4. James classified four objects into two different groups according to whether they are flexible or not.

Objects	
Group A	Group B
Wooden pencil	Rubber band
Steel ruler	Paper towel

Which of the following objects are correctly classified?

- a. Group A: Plastic chopstick;
Group B: Cotton shoe lace
 - b. Group A: Plastic bag;
Group B: Glass rod
 - c. Group A: Glass rod;
Group B: Plastic chopstick
 - d. Group A: Plastic bag;
Group B: Cotton shoe lace
5. Consider the following statements and choose the correct option:
 Statement 1: Carbohydrates are the only nutrient that provides energy for the body.
 Statement 2: Proteins help us to build muscles and repair damaged tissue on the body.
 Statement 3: Calcium makes our teeth and bones strong. Green leafy vegetables, apples, carrots are rich in calcium.
- a. Statement 1 is correct but statement 2 and 3 are incorrect.
 - b. Statement 1 is incorrect but statement 2 and 3 are correct.
 - c. Statement 2 is correct but statement 1 and 3 are incorrect.
 - d. Statement 2 is incorrect but statement 1 and 3 are correct.
6. Which of the following statement is incorrect about mercury?
- a. Mercury is only slightly larger than Earth's Moon.

- b. From the surface of Mercury, the Sun would appear more than three times as large as it does when viewed from Earth.
- c. Mercury is the slowest planet in our solar system.
- d. Mercury has a solid, cratered surface.

7. Consider the following description and identify the planet:
1. It makes a complete orbit around the Sun in 687 Earth days.
 2. It is a dynamic planet with seasons, polar ice caps, canyons, extinct volcanoes.
 3. It has no rings.
 4. It has two moons.

- a. Venus
- b. Mars
- c. Earth
- d. Jupiter

8. Match the following:

	Column A		Column B
1.	Mercury	a.	Largest planet
2.	Venus	b.	Coldest planet
3.	Jupiter	c.	No moon
4.	Uranus	d.	Hottest planet

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

9. Jake had the following objects. How many among them will be categorized as opaque objects?
Glass window, Paper towel, Aluminium foil, Wax paper, Book, Wooden table

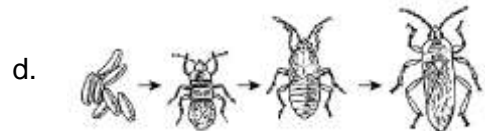
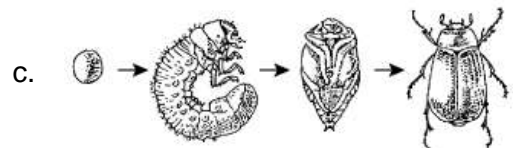
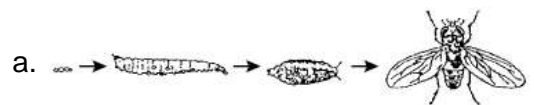
- a. 1
- b. 2
- c. 3
- d. 4

10. Some students were watching the movement of a shadow. In the diagram below, where is the sun?

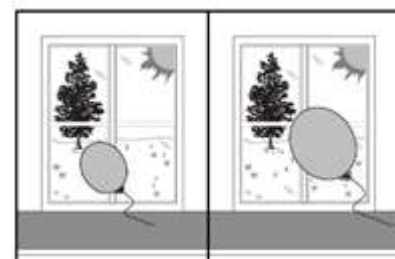


- a. W
- b. X
- c. Y
- d. Z

11. Which of these shows an animal that looks similar to its parent during its life after hatching?



12. Peter put his balloon near a window. The picture shows what happened to the balloon after it was near a window for about an hour. Which of these probably caused the balloon to become larger?



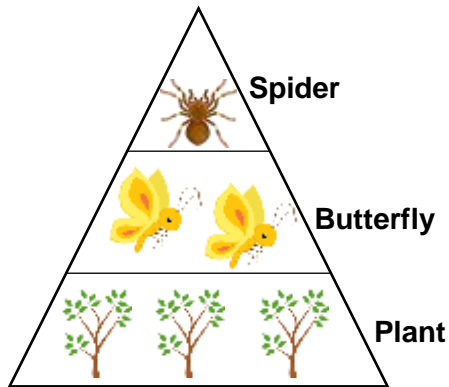
Before **After 1 hour**

- a. Heat from the sun
- b. Glass in the window
- c. The tree by the window
- d. The string on the balloon

13. Which of these describes water in a state that has a fixed volume and shape?

- a. Vapor rising in the sky
- b. Hail during a storm
- c. Waves crashing on the seashore
- d. Rain falling from the clouds

14. Based on the chart, what is the role of the butterflies?



- a. Producer
- b. Decomposer
- c. Carnivore
- d. Herbivore

15. George dissolved the following items in water. Which of these can be dissolved in water?

- a. Grains of sand
- b. Baking soda
- c. Wood chips
- d. Cooking oil

16. Which of these will take the LONGEST time to observe?

- a. One moon-phase cycle
- b. One ocean-tide cycle
- c. An acorn growing into an adult tree
- d. A caterpillar becoming a butterfly

17. Which of these lists has only products that come from plants?

- a. Paper, spices and jute
- b. Wool, lumber and butter
- c. Medicines, leather and milk
- d. Cotton, rubber and eggs

18. These living things are in a pond food chain. Which of these are both prey and predator?

- a. Algae
- b. Dragonflies
- c. Frogs
- d. Fungi

19. Fill in the blanks:

Some celestial bodies are very big and hot. They are made up of gases and they have their own heat and light. These celestial bodies are called _____. For example, _____.

- a. stars, sun
- b. planets, earth
- c. stars, moon
- d. constellation, sun

20. Through which of the following objects sound will travel the fastest?

- a. Metal rod
- b. Water
- c. Vacuum
- d. Oil

21. Which of these is MOST likely a behavior of tame animals that is different from wild animals?

- a. Moving to a warmer climate in winter
- b. Eating out of the hands of humans
- c. Hunting for their own food
- d. Staying away from people

22. Which of the following is one non-living part in the habitat of a bluebird?



- a. Insects they eat
- b. Air they breathe
- c. Hawks that eat them
- d. Plants they use for nests

23. Some students paint the inside of several boxes. They paint each box a different color. They observe that the inside of the box painted white looks brighter than the others. What is the most likely reason this box looks brighter?

- More light is reflected off white paint.
- More light is refracted by white paint.
- More light passes through white paint.
- More light is absorbed by white paint.

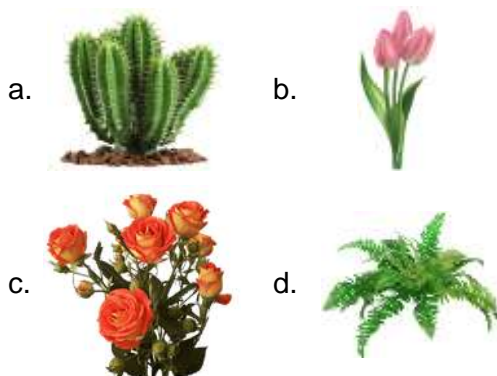
24. Which change occurs when lemon juice is mixed with water?

- The mass of the lemon juice decreases.
- The water becomes a solid.
- The lemon juice dissolves and spreads out evenly in the water.
- The volume of the water decreases.

25. Kate spilt the water on the kitchen table and left it as it was. She noticed that after some time the water was nowhere to be seen. Which of the following phenomenon must have taken place?

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

26. Which of the following is a type of plant that has a thick, fleshy stem and can store water for long periods of time?



27. Consider the following examples related to a particular force:

- The force that keeps planets in orbit around the sun.
- The force that keeps us on the ground.
- The force that causes objects to fall.

Identify the force:

- Magnetic force
- Frictional force
- Gravitational force
- Both a and b

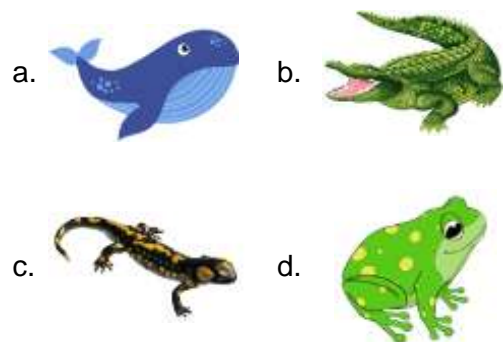
28. Consider the following clues about the type of animal 'X'.

Clue 1: These are animals that have dry scales.

Clue 2: They lay eggs.

Clue 3: They are cold-blooded.

Which of the following is an example of 'X'?



29. Maria wants to have a balanced diet. Which combination of foods should she include in her meal to ensure she gets carbohydrates, proteins, and protective nutrients?

- Bread, cheese, and broccoli.
- Rice, chicken, and oranges
- Pasta, butter, and bananas
- Fish, eggs, and spinach

30. In a science project, you investigate how much air you can inhale and

exhale in one minute during different activities like walking and running. Which organ system is the main focus of your project?

- a. Muscular System
- b. Respiratory System

- c. Skeletal System
- d. Fish, eggs, and spinach

Achievers' Section (Each Question is 6 Marks)

31. Match the following:

	Column I		Column II
1.	Organisms that feed on the flesh of other organisms	i.	Mushroom
2.	Organisms that feed only on plants	ii.	Platypus
3.	Organisms that feed on plants and other organisms	iii.	Skunk
4.	Organisms that get their food from dead and decaying matter	iv.	Elk

- a. 1 - ii, 2 - iii, 3 - i, 4 - iv
- b. 1 - ii, 2 - iv, 3 - iii, 4 - i
- c. 1 - i, 2 - ii, 3 - iii, 4 - iv
- d. 1 - iv, 2 - iii, 3 - ii, 4 - i

32. Consider the following clues and identify the plant:

Clue 1: It is adapted for sandy soil, dry climates, and bright sunlight.
 Clue 2: It grows well in desert areas.
 Clue 3: Excess water is stored in the pads of the plant.

- a. Prickly pear
- b. Cocount
- c. Palm tree
- d. Lily

33. In which of the following odd one is correctly underlined?

- 1. Bread, potato, orange, spaghetti

- 2. Egg, salmon, chickpeas, milk
- 3. Broccoli, apple, guava, peanut
- 4. Olive, butter, eggs, juice

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

34. Harry classified the food items as shown below:

A	B
Peas, pulses, nuts, beans seeds	Fish, eggs, dairy products,

Identify on what bases Harry has classified these food items?

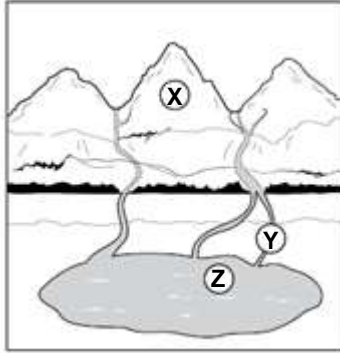
- a. A: Plant protein, B: Animal protein
- b. A: Foods rich in carbohydrates, B: Foods rich in protein
- c. A: Foods rich in protein, B: Foods rich in carbohydrates
- d. A: Body building foods, B: Foods rich in fats

35. Use the drawing and chart below to answer the question.

Feature	Student 1	Student 2	Student 3	Student 4
X	Valley	Mountain	Valley	Mountain
Y	Peninsula	River	Peninsula	River
Z	Watershed	Lake	lake	Watershed

Which of the following student identified X, Y and Z correctly?

Environment



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

36. Tom recorded the obseravtion as given below:

1. Clear - no colour
2. Feels cold
3. Feels hard
4. No smell

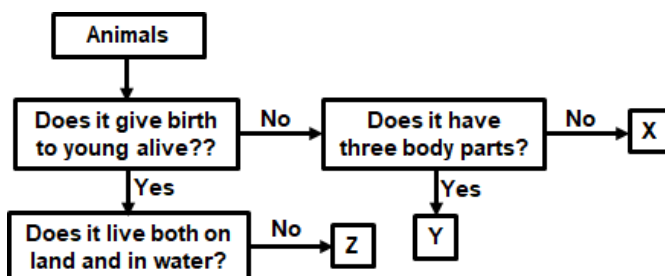
Which of the following best describe the observation made by Tom?

- a. A sugar cube
- b. An ice cube
- c. A cherry snow cone
- d. An ice cream cone

37. A summer day begins with a clear, sunny sky. Then, dark clouds form in the afternoon. What type of weather will MOST likely happen next?

- a. Sleet and snow
- b. Rain and thunder
- c. Wind and snow
- d. Fog and wind

38. Study the flow chart below carefully. Which of the following groups of animals best represent X, Y and Z?



- a. X - Bird, Y - Reptile, Z - Mammal
- b. X - Fish, Y - Insect, Z - Amphibian
- c. X - Insect, Y - Bird, Z - Reptile
- d. X - Amphibian, Y - Insect, Z - Mammal

39. Which of the following statements are true of the digestive system?

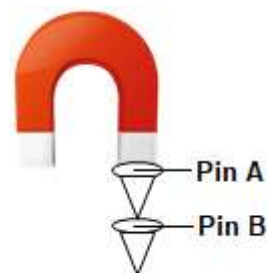
- A. The windpipe is part of the digestive system.
- B. Digested food is absorbed in the small intestine.
- C. It helps to break down food into simpler substances.
- D. Digestion starts at the mouth and ends at the stomach.

- a. A and D only
- b. B and C only
- c. A, C and D only
- d. B, C and D only

40. One day Ron was looking at the night sky and noticed that the whole disc of the moon was visible. Thereafter, every night he observed the night sky and concluded that the size of the bright part of the moon appears to become thinner and thinner. What will be shape of the moon called on the 28th day from the day he saw the whole disc of moon?

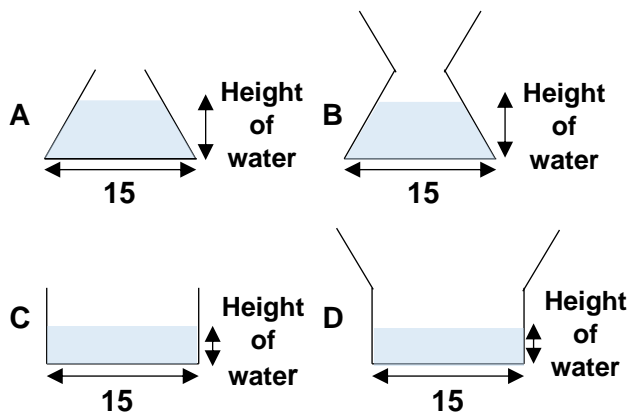
- a. Full moon
- b. Gibbous moon
- c. New moon
- d. Crescent moon

41. A horseshoe-shaped magnet was held over some pins and the diagram below shows the interaction of pin A and pin B. Why is pin B attracted to pin A as shown below?



- a. Pin A is made of aluminium.
- b. Pin A cannot be magnetized.
- c. Pin A is a temporary magnet.
- d. Pin A is a non-magnetic material.

42. Peter poured 300 cm³ of water into each of the containers shown below which were made of the same material. The containers were left in the garden. Which of the following containers would have the least amount of water left after a few hours?



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

43. A student observes that the craters on the moon are of different sizes. The student designs an experiment to study the formation of craters. The materials for the experiment are marbles and a pan of flour. The student makes a hypothesis that the size of the craters made on the surface of the flour will depend on the height from which the marble is dropped. Some of the steps in the student's experiment are described below.

- 1: Fill a round pan with flour
- 2: Smooth out the flour in the pan
- 3: _____
- 4: For each trial, measure the size of the crater formed and then smooth out the flour again.

Which of these is most likely Step 3 in the student's experiment?

- a. Drop the same marble from different heights into the pan of flour
- b. Drop marbles of different masses from the same height into the pan of flour
- c. Drop marbles of different sizes from different heights into the pan of flour
- d. Drop a single marble one time into the pan of flour

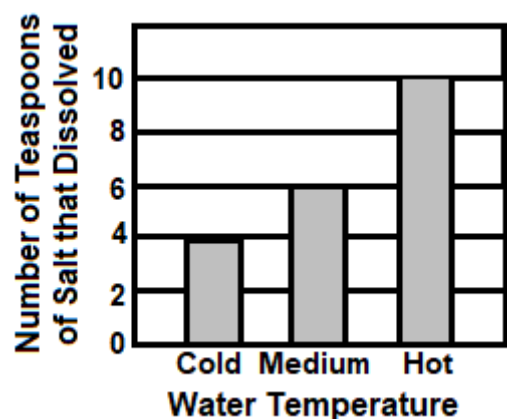
44. Peter conducted a study on two animals, P and Q. He recorded his observations in the table below.

Which of the following sets identifies animals P and Q correctly?

Observation	Animal P	Animal Q
There are 4 stages in its life cycle.	Yes	Yes
Its eggs are laid on land.	Yes	No
Its young do not have wings.	Yes	Yes

- a. Animal P: Butterfly, Animal Q: Mosquito
- b. Animal P: Mosquito, Animal Q: Butterfly
- c. Animal P: Cockroach, Animal Q: Butterfly
- d. Animal P: Mosquito, Animal Q: Cockroach

45. The graph shows what happened when salt was added to water in a glass. According to the graph, which of these is correct?



- a. Salt tastes different when water is heated.
- b. Salt will cause water to heat up.
- c. Salt is used to make hot water.
- d. Salt dissolves more easily in hot water

46. Fill in the blanks:

1. _____ are small to medium-sized plants with multiple woody stems. For example _____.
2. _____ are short, with a soft and flexible stem, and usually used for cooking or medicinal purposes.
3. _____ has a single stem or trunk, and many branches and leaves?

- | | |
|--------------------|--------------------|
| a. 1 - Shrub, rose | b. 1 - Shrub, mint |
| 2 - Herb | 2 - Herb |
| 3 - Tree | 3 - Tree |
| c. 1 - Herb, basil | d. 1 - Herb, rose |
| 2 - Shrub | 2 - Shrub |
| 3 - Tree | 3 - Tree |

47. Which of the following is an example of a plant adaptation for survival in a dry environment?

1. Waxy leaves to prevent water loss
2. Broad leaves to capture more sunlight
3. Thin leaves to allow for more efficient gas exchange
4. Dark leaves to absorb more heat

- | | |
|-----------------|-----------------|
| a. Only 1 | b. Only 2 |
| c. Both 1 and 3 | d. Both 2 and 4 |

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

Statement 1: The change of state from a solid to a liquid due to an increase in temperature is called melting.

Statement 2: The formation of dew on the grass is an example of sublimation.

Statement 3: The change of state from a liquid to a solid due to a decrease in temperature is called freezing.

- a. Statement 1 is correct but statements 2 and 3 are incorrect.
- b. Statement 1 is incorrect but statements 2 and 3 are correct.
- c. Statement 2 is incorrect but statements 1 and 3 are correct.
- d. Statement 3 is incorrect but statements 1 and 2 are correct.

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

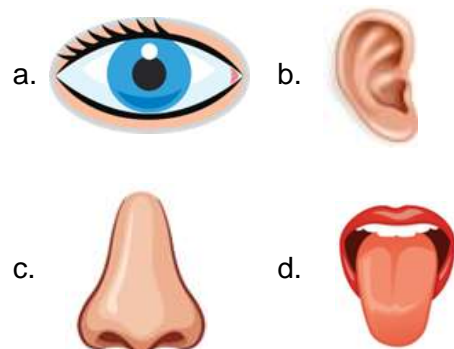
Statement 1: Camel is adapted to live in the desert.

Statement 2: Walrus is adapted to live in the rainforest.

Statement 3: Rabbit is adapted to live in underground burrows.

- a. Statement 1 is correct but statements 2 and 3 are incorrect.
- b. Statement 2 is correct but statements 1 and 3 are incorrect.
- c. Statement 2 is incorrect but statements 1 and 3 are correct.
- d. Statement 3 is incorrect but statements 1 and 2 are correct.

50. Tom was given a box that has two red balls and three green balls. He was asked to find out the total number of red balls in the box. Which of the following sense organ will he use to find out the same?



Answer Key

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