



## CREST Science Olympiad (CSO)

### Previous Year Paper

# Class 7 (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. Which organism is described in the information given below?

- (i) Respire anaerobically
- (ii) Used to make wine
- (iii) Reproduces by budding

- a. Potato
- b. Grapes
- c. Yeast
- d. Mucor

2. Choose the correct statement:

- a. Corn, papaya and cucumber produce unisexual flowers whereas mustard, rose and petunia have bisexual flowers.
- b. Corn, papaya and cucumber produce male gametes whereas mustard, rose and petunia have female gametes.
- c. Corn, papaya and cucumber seeds are dispersed by wind whereas mustard, rose and petunia seeds are dispersed by water.
- d. Corn, papaya and cucumber produce bisexual flowers whereas mustard, rose and petunia have unisexual flowers.

3. Robert was all alone at home and was studying. Someone came and rang the doorbell. Robert wanted to see who it was before opening the door so he saw through the peephole of the door. Which of the following is used for making the peepholes in the door?

- a. Convex lens
- b. Convex mirror
- c. Concave mirror
- d. Concave lens

4. Which of the following is correctly matched step involved in the processing of fibres into wool with its description as given below?

1. Step: Shearing

Description: The fleece of the sheep along with a thin layer of skin is removed from its body with the help of a machine.

2. Step: Sorting

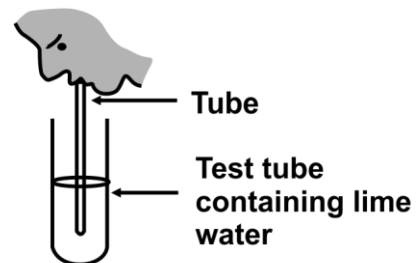
Description: The small fluffy fibres or burrs are sorted in the factory.

3. Step: Scouring

Description: The sheared skin with hair is thoroughly washed in tanks to remove grease, dust and dirt which are done nowadays in machines.

- a. Only 1
- b. Only 2
- c. Only 3
- d. All of the above

5. In the picture given below, we can see a boy exhaling air into a test tube containing lime water. Select the effect of blowing air into the lime water:



- a. Lime water turns colourless.
- b. Lime water turns milky.
- c. Lime water becomes solid.
- d. Lime water turns blue in colour.

6. Two classmates were having a class discussion about cyclones. This is what they said:

Student 1: The difference in atmospheric pressure gives rise to the wind on the earth.

Student 2: High-speed winds are accompanied by reduced air pressure. Who among the above student(s) was/were wrong?

- a. Student 1 only
- b. Student 2 only
- c. Both the students
- d. None of them

7. Fill in the blanks:

1. The process of arranging two sets of yarn together to make a fabric is called \_\_\_\_\_.
2. The process of making yarn from fibres is called \_\_\_\_\_.

- a. 1-weaving, 2-spinning
- b. 1-spinning, 2-weaving
- c. 1-knitting, 2-ginning
- d. 1-sheaving, 2-combing

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

Statement 1: An electric iron, electric heater, electric oven, filament bulbs, etc., all work on the heating effect of the electric current.

Statement 2: The amount of heat produced in a wire depends on its length, thickness, nature of the material, amount of current flowing and time for which the current flows.

- 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.

9. What is the common feature seen among all Siberian crane birds?

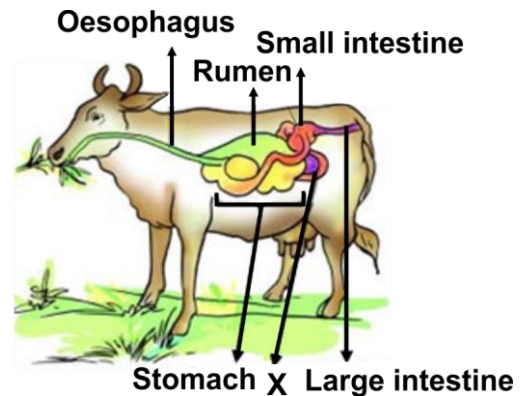
- a. They are adapted to living on trees.
- b. They are adapted to get food not easily reachable as they have long and large beak.
- c. They are all migratory birds and they migrate to warmer regions when winter sets in.

- d. They are adapted to remain under water for long.

10. Which of the following is not the function of saliva?

- a. Digestion of fats
- b. Breaks down the starch into sugars
- c. Mixes with food during chewing
- d. Helps in swallowing of food

11. Look at the picture of the digestive system in a ruminant below. Identify and state the role of the part marked 'X':



- a. Rectum - Excretes the undigested food out from here.
- b. Rumen - Digestion of fats takes place here.
- c. Pancreas - Digestive juices are secreted here.
- d. Caecum - Digestion of the cellulose of the food takes place here.

12. Which of the following statements is/are correct?

1. Xylem and phloem appear in the midrib of the leaf, as well as in the leaf veins.
2. Food substances travel in the phloem; water and salts travel mainly in the xylem.
3. The phloem carries water and salts from the root to the stem. The xylem brings food from the stem to the root,

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

13. We get various products from the forests surrounding us. Forest is a system comprising various plants, animals and micro-organisms. Which of the following is not a forest product?

- a. Gum                      b. Wax
- c. Catechu                d. Polyester

14. Fill in the blanks:

1. The silk yarn (thread) is obtained from the \_\_\_\_\_ of the silk moth
2. The eggs are warmed to a suitable temperature for the \_\_\_\_\_ to hatch from eggs.

- a. 1-larva, 2-eggs
- b. 1-cocoon, 2-larva
- c. 1-cocoon, 2-pupa
- d. 1-pupa, 2-cocoon

15. When a piece of iron is left out in the open it acquires a brownish substance on top of it.

Identify the INCORRECT statement related to rusting:



- a. The more humid the air, the faster the rusting occurs.
- b. Rusting occurs in the absence of oxygen.
- c. Saltwater speeds up rusting.
- d. Rust is nothing but iron oxide.

16. Which of the following statements is/are correct?

1. Lemon juice changes the colour of the china rose to dark pink.
2. Detergent changes the colour of china rose to dark green.

3. Ammonia does not change the colour of china rose.

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

17. Choose the correct option and complete the following sentence: Stomata play an important role in photosynthesis. It is essential for the \_\_\_\_\_.

- a. reduction of oxygen to carbohydrates
- b. reduction of carbon-dioxide
- c. exchange of gases between atmospheric oxygen and carbon dioxide
- d. absorbing light energy and converting it into chemical energy

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

Statement 1: Relative humidity depends on the temperature and keeps on changing throughout the day.

Statement 2: During conditions of high humidity, the evaporation of sweat decreases and it becomes difficult to maintain the body temperature.

- 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.

19. Identify the method through which the following grow into plants:



- a. Cutting                      b. Budding
- c. Grafting                    d. All of the above

20. Choose the correct option and complete the following sentence:  
Evaporation is a type of vaporisation that occurs on the surface of a liquid as it changes into the gas phase.  
Evaporation is used to \_\_\_\_\_.

- obtain a soluble solute from a solution
- separate solids of different sizes
- separate liquids of different boiling points
- none of these

21. What causes the formation of white patches in underarms?

- Sugars present in the sweat.
- Acids present in the sweat.
- Salts present in the sweat.
- Bases present in the sweat.

22. Rachel went to the supermarket to buy cooking utensils. Help her to choose the correct utensil:

- Frying pan with aluminium handle.
- Stainless steel frying pan with wooden bottoms.
- Stainless steel frying pans with plastic bottom.
- Frying pan with plastic handle.

23. A method used to protect a steel or iron article from getting rusted is by adding a protective layer of zinc. What is this process called?

- Condensation
- Rusting
- Crystallisation
- Galvanisation

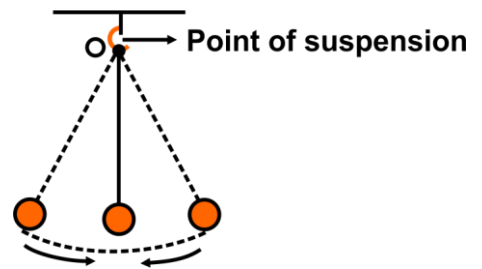
24. Given below are a set of phenomena:

- Breaking of glass
- Melting of chocolate
- Sawing of wood
- Crushing a can

What is the basis of the above-given grouping?

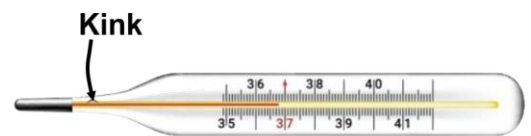
- They all show chemical changes.
- They all show physical changes.
- They all show both physical and chemical changes taking place.
- They all show no change in the states of matter.

25. Fill in the blank with the correct option:  
Time taken for one oscillation in a simple pendulum depends on the \_\_\_\_\_.



- mass of the bob
- size of the bob
- length of the pendulum
- distance of the bob from the mean position

26. What is the use of the kink present near the bulb in such thermometer?



- The kink helps the heat to flow from a hotter object to a colder object.
- The kink helps the mercury level to fall off on its own.
- The kink prevents the mercury level from falling on its own.
- The kink helps us to hold the thermometre with care.

27. Complete the following sentence:

The picture given below shows the skull of an animal that has large canines and molars and small vestigial teeth behind the canines. It is the skull of a \_\_\_\_\_.



**Vestigial teeth**

- a. omnivore      b. carnivore  
c. herbivore     d. parasite

**28.** Sara, George and Ron were having a classroom discussion on the transport of substances in animals. This is what they said:

**Sara:** The blood looks red in colour due to the presence of platelets.

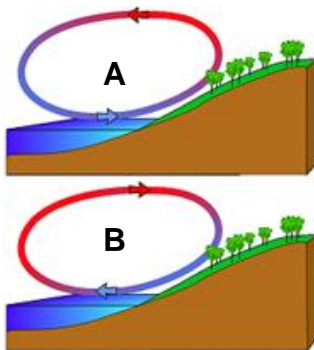
**George:** Blood carries digested food and oxygen to all parts of the body. It also carries away waste products.

**Ron:** Arteries and veins are joined by a network of haemoglobin.

Who among them is/are correct?

- a. Only Sara  
b. Only George  
c. Only Ron  
d. All- Sara, George and Ron

**29.** Observe the given picture. What are the labelled parts A and B called?



- a. A-Breeze, B-Wind  
b. A-Sea breeze, B-Wind  
c. A-Sea breeze, B-Land breeze  
d. A-Land breeze, B-Sea breeze

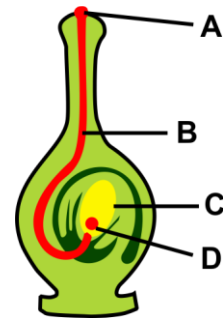
**30.** Match the items of column A with those of column B and select the correct option:

Column I		Column II	
1.	Terracing	a.	Decayed vegetable or animal matter
2.	Erosion	b.	Cutting down forests
3.	Deforestation	c.	Practised in hilly areas
4.	Humus	d.	Causes the topsoil to wear away

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

**31.** Look at the picture shown below and answer the question.

Which among the labelled parts are egg cell and pollen tube?



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

**32.** Which of the following characteristics of the lion-tailed macaque are not adaptations to the conditions of the rainforests?

1. Strong sense of smell
2. Silver-white mane
3. Good climber
4. Thick skin
5. Rarely comes down on the ground

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

**33.** In the following question, an assertion and a reason are given. Choose the correct option:

**Assertion:** Burning of a candle is considered a physical as well as chemical change.

**Reason:** Melting of wax is a physical change, melted wax turns into vapours and then burns which is a chemical change.

- Both assertion and reason are true but reason is the correct explanation of assertion
- Both assertion and reason are true and reason is not the correct explanation of assertion
- Assertion is true but reason is false
- Assertion is false but reason is true

**34.** Read the following statements:

- Synthetic fibres are made from chemicals that are mainly obtained from petroleum.
- Clothes made from synthetic fibres are stronger than the clothes made from natural fibres.
- Anthrax is a fatal viral disease which occurs in animals and humans.
- Wool easily catches fire and burns with the smell of burning plastic.

Which of the above statements are not true?

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

**35.** Which of the following statements is incorrect?

- As a result of sneezing, unwanted particles are thrown out of the body.
- Trachea is divided into two bronchi which enter into respective lungs.
- The alveoli of lungs are not supplied with blood vessels.
- Breathing rate does not remain the same under all conditions.

**36.** Marking on a bulb is 60 W, 220 V. What does it signify?

- The bulb is connected across the 220 volts and 60 joules of energy is consumed for every second.
- The bulb is connected across 60 joules and 220 volts of energy is consumed.
- 60 unit of current will flow in the bulb.
- 220 unit of current will flow in the bulb.

**37.** In the following question, an assertion and a reason are given. Choose the correct answer:

**Assertion (A):** Pulmonary vein carries impure blood to the lungs.

**Reason (R):** Pulmonary veins are responsible for carrying oxygenated blood from the lungs back to the heart.

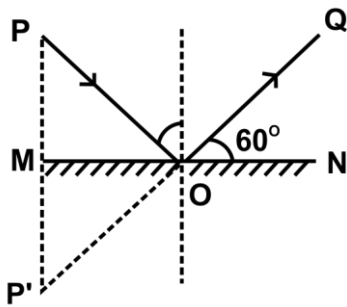
- Both A and R are true and R is the correct explanation of A.
- Both A and R are true but R is not the correct explanation of A.
- A is true but R is false.
- A is false but R is true.

**38.** Study the given table and select the correct option:

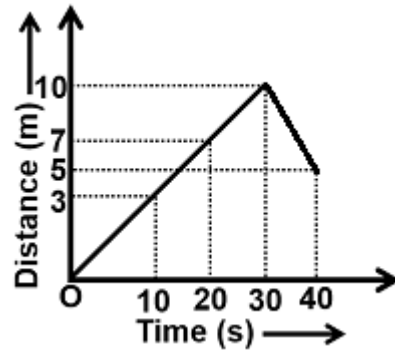
Methods	Examples
Budding	(i)
Spore formation	(ii)
Fragmentation	(iii)
Vegetative propagation	(iv)

- (i) Yeast, (ii) Rhizopus, (iii) Spirogyra, (iv) Dahlia
- (i) Dahlia, (ii) Yeast, (iii) Rhizopus, (iv) Spirogyra
- (i) Spirogyra, (ii) Dahlia, (iii) Yeast, (iv) Rhizopus
- (i) Yeast, (ii) Spirogyra, (iii) Dahlia, (iv) Rhizopus

39. A light ray from an object 'P' is reflected from a mirror as shown in the figure. Select the correct statement:



- a. Angle of incidence is  $30^\circ$   
 b.  $PM = MP'$   
 c.  $\angle PON = 120^\circ$   
 d. All of the above
40. The distance-time graph of a toy car is given below. Choose the correct statement from the following:



- a. The toy car is fastest during the first 10 seconds.  
 b. Distance travelled during the last 10 seconds in 4 m.  
 c. Distance travelled during the last 10 seconds in 5 m.  
 d. Distance travelled during the first 10 seconds in 5 m.

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

41. Sam travelled by plane flying at an average speed of 600 km/h. The plane left the airport at 13:00 h and reached its destination at 15:45 h. How far did Sam travel?

- a. 1350 km                      b. 1200 km  
 c. 1650 km                      d. 1800 km

42. Carefully look at the following experiment:

'X' was taken and made to react with crushed eggshells. A gas was given out which turned lime water milky. Identify 'X':

- a. NaCl  
 b. KCl  
 c. HCl  
 d. Can be any one of the above

43. Which of the following statements is/are incorrect?

1. The transfer of heat by radiation does not require any medium.

2. During the day, the land loses heat faster than water and becomes cooler.  
 3. On heating, the density of the substance always decreases.  
 4. The constant movement of water while heating is called a convection current.

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

44. Read the statements given below:

Statement 1 - Workers of the sericulture industry often develop asthma, chronic bronchitis and other respiratory ailments.

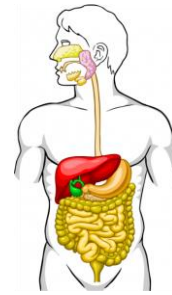
Statement 2 - Knitting is the process by which a single strand of yarn is used to make a piece of fabric.

Statement 3 - Wool is obtained only from the fleece of sheep or goats.

Which of the above statements is/are false?



- a. Statement 1 only
- b. Statement 3 only
- c. Statements 2 and 3
- d. None of the statements is correct



45. Read and complete the following sentence:

The change in shape of a hot tin can containing water vapour, when cold water is poured on it is because \_\_\_\_\_.

- a. pressure inside the can becomes less than that outside
- b. pressure inside the can becomes more than that outside
- c. pressure outside the can is same as that inside
- d. pressure inside the can becomes equal to the atmospheric pressure

46. Which of the following is one of the features polar bears adapt to live in an extremely cold climate?



- a. It has webbed feet.
- b. It breathes through blowholes.
- c. It has a thick layer of fat under the skin.
- d. It has cheek pouches to collect food.

47. Observe the picture given below carefully and spot the part of the digestive tract which is involved in the conversion of maltose into glucose by the enzyme maltase:

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

48. Choose the correct option and complete the following sentence:

While moving around in the kitchen, David observed whitish, greyish, cotton-like threads on a slice of bread. The whitish or greyish, cotton-like threads found on the surface of the bread slice are \_\_\_\_(i)\_\_. They obtain nutrition by \_\_\_\_(ii)\_\_.

- a. (i)-fungi, (ii)-feeding on dead and decaying organic matter
- b. (i)-algae, (ii)-feeding on dead and decaying organic matter
- c. (i)-fungi, (ii)-manufacturing their own food
- d. (i)-algae, (ii)-manufacturing their own food

49. The steps in the digestive process listed below are not in order. What is the correct order of these events as food passes through the human digestive tract?

- i. Water and vitamin absorption begins.
- ii. Food is liquefied; breakdown of proteins begins.
- iii. Food is moistened; breakdown of starch begins.
- iv. Proteins, carbohydrates, and fats break down; nutrients are absorbed into the bloodstream.

- a. ii, iv, i, iii
- b. iv, ii, iii, i
- c. i, iii, ii, iv
- d. iii, ii, iv, i

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

50. Match the List-I with List-II:

List-I		List-II	
a.	Quick lime	1.	NaHCO <sub>3</sub>
b.	Caustic soda	2.	Na <sub>2</sub> CO <sub>3</sub>
c.	Washing soda	3.	NaOH
d.	Baking soda	4.	Ca(OH) <sub>2</sub>
		5.	CaO

## Answer Key

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