

# Science Assessment

Curriculum & Sample Questions

# 1

## CURRICULUM

Me and Myself; Housing and Clothing; Living and Non-living things; Plants; Animals; Good Habits, Safety Rules, and First Aid; Solar System; Our Environment; Logical Reasoning

## Sample Questions

*The Actual Question Paper Contains 30 MCQs, out of which 25 questions are based on Subject Knowledge and 5 are based on Logical Reasoning. The Duration of the Test Paper is 60 Minutes.*

1. I ate a pizza and an ice cream. One was spicy and the other was sweet. My \_\_\_\_\_ helped me to know the difference between the tastes.

- (A) Hands (B) Eyes  
(C) Tongue (D) Nose

2. Mention the part of plant to which the given vegetables belong.



Onion



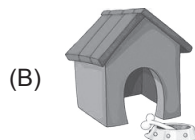
Ginger



Potato

- (A) Root (B) Leaf  
(C) Stem (D) Flower

3. Bird : Nest :: Child : \_\_\_\_\_.



4. I am the once alive non-living thing. Guess who am I?

- (A) Paper (B) Steel  
(C) Turtle (D) Gold

5. What should NOT be there in a first aid kit?

(A)



(B)



(C)



(D)



6. Presence of my home in your home shows your house is not cleaned well. Which animal am I?

(A) Fish

(B) Turtle

(C) Spider

(D) Cat

7. Who was the first Indian person to go into space?

(A) Kalpana Chawala

(B) Rakesh Sharma

(C) Neil Armstrong

(D) Sunita Williams

8. Which of the following pairs you see in water bodies?

(A) Dog – Fish

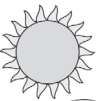
(B) Lotus – Fish

(C) Water lily – Dove

(D) Ship – Cat

9. On which day is there a chance of seeing a rainbow in the sky?

(A)



(B)



(C)



(D)



10. Mr. Rajesh is my grandfather. He has one son and one daughter. Mr. Rajesh's son is my \_\_\_\_\_.

(A) Brother

(B) Father

(C) Mother

(D) Cousin

Grade-1

1. C

2. C

3. C

4. A

5. C

6. C

7. B

8. B

9. C

10. B

# Science Assessment

Curriculum & Sample Questions

2

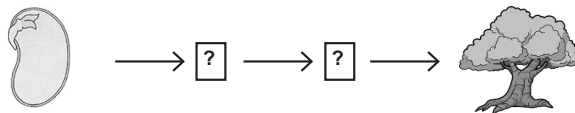
## CURRICULUM

Me and Myself; My Surroundings; Living and Non-living Things; Plants; Animals; Earth and Universe; Our Environment; Air, Water and Weather; Good Habits, Safety Rules, and First Aid; Logical Reasoning

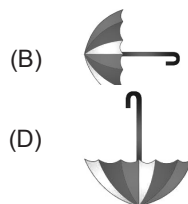
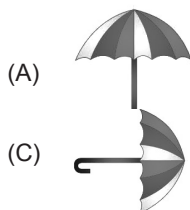
## Sample Questions

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- Swati was arranging *diyas* and candles in a line on the railing of her house so that she can light them in the evening. By lighting of *diyas* and candles which festival will she celebrate?
  - Dussehra
  - Holi
  - Diwali
  - Eid
- Fill in the blanks with what comes next.



- Plants, Leaves
  - Plant, Flowers
  - Seedling, Plant
  - Seedling, Flower
- Pick the odd one out from the following groups and choose the correct set.
    - Cow, Buffalo, Fox, Goat
    - Lion, Leopard, Monkey, Tiger
    - Crow, Sparrow, Rabbit, Parrot
    - Fox, Monkey, Parrot
    - Buffalo, Tiger, Crow
    - Cow, Lion, Rabbit
    - Monkey, Goat, Crow
  - Umbrella is used to protect us from rain. Which condition of umbrella will help you to collect rain water?



5. Identify the **INCORRECT** pair.

- (A) House boat : Lake (B) Tent house : Water logged place  
(C) Stilt house : Water logged place (D) Igloo : Ice clad mountain

6. Some people cannot speak but still they can communicate. Which method do they use to express their feelings?

- (A) Letter (B) Mobile phone  
(C) Sign language (D) Drawing picture

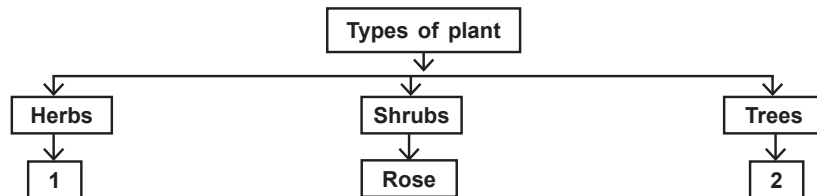
7. Swati visited a restaurant. She read the menu given as follows:

**Burger, Pizza, Noodles, Chilly potato, Lemon rice**

Pick the only healthy food.

- (A) Burger (B) Pizza  
(C) Noodles (D) Lemon rice

8. Identify 1 and 2 in the flow chart given below.



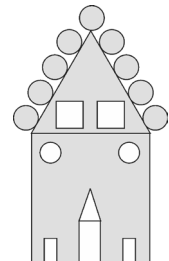
- (A) 1-Mango, 2-Tomato (B) 1-Mint, 2-Mango  
(C) 1-Guava, 2-Coriander (D) 1-Coriander, 2-Mint

9. Swati's uncle Mr. Vivek stays in New Jersey, USA. When she called him at daytime from Delhi, she came to know it was night there. This is because \_\_\_\_\_.

- (A) USA is on the other side of the earth (B) Light travels in a straight line  
(C) Of the rotation of the earth (D) All of these

10. The figure is made up of \_\_\_\_\_ squares, \_\_\_\_\_ circles, \_\_\_\_\_ rectangles and \_\_\_\_\_ triangles.

- (A) 3, 10, 2, 2 (B) 2, 11, 3, 1  
(C) 2, 10, 3, 2 (D) 3, 11, 3, 2



**Grade-2**

1. C	2. C	3. A	4. D	5. B	6. C	7. D	8. B	9. D	10. D
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# Science Assessment

Curriculum & Sample Questions

# 3

## CURRICULUM

Plants; Animals and Birds; Human Body and Food; Housing, Clothing, and Occupation; Good Habits, Safety Rules, and First Aid; Matter and Material; Earth and Universe; Our Environment; Logical Reasoning

## Sample Questions

The Actual Question Paper Contains 30 MCQs, out of which 25 questions are based on Subject Knowledge and 5 are based on Logical Reasoning. The Duration of the Test Paper is 60 Minutes.

### 1. Who among all are WRONG?

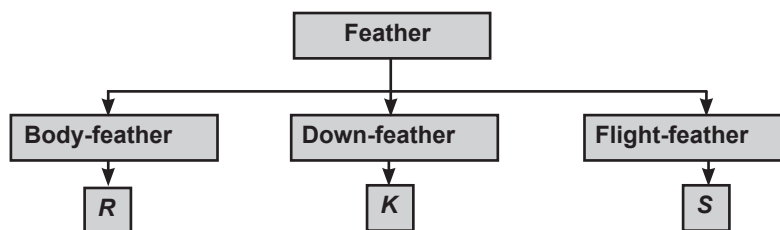
Four children are shown with speech bubbles:

- Deepa: "The leaves make food for plant."
- Mahak: "The leaves have tiny openings."
- Vaibhu: "The leaves provides us oxygen."
- Vicky: "Some leaves are edible."

- (A) Deepa and Vaibhu  
(C) Vaibhu and Vicky

- (B) Mahak and Vicky  
(D) None of them

### 2. Different types of feathers perform unique role. In the given flow chart, identify the role of the feathers labelled as R, K and S.

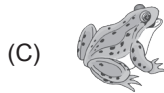
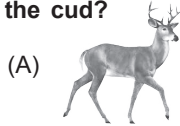


- (A) R-keeps the body warm, K-helps in flying, S-covers the body  
(B) R-covers the body, K-keeps the body warm, S-helps in flying  
(C) R-helps in flying, K-keeps the body warm, S-covers the body  
(D) R-keeps the body warm, K-helps in flying, S-covers the body

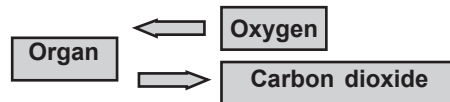
### 3. I am a land plant. My leaves are used as vegetable and seeds are used to produce oil. Who am I?

- (A) Mustard (B) Spinach  
(C) Broccoli (D) Cabbage

4. Chiku learned that grass-eating animals have sharp front teeth to bite food and strong broad back teeth to chew their food. She also learned that some of them chew the cud. In which of the following animals is she likely to find sharp front teeth and strong back teeth to chew the cud?



5. The flow chart given below represents an organ which takes in oxygen and gives out carbon dioxide. Identify the organ.



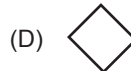
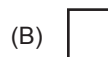
- (A) Stomach (B) Lungs  
(C) Kidney (D) Brain
6. People who keep moving from one place to another are called \_\_\_\_\_.  
(A) Eskimos (B) Nomads  
(C) Metropolitan (D) Citizens

#### 7. EMBAJUNA

A mode of transport has these alphabets written on it. It is used for \_\_\_\_\_.

- (A) Travelling (B) Transporting patients  
(C) Transporting passengers (D) Transporting goods
8. The given statements are the feature of which type of soil?  
(i) Soil particles are very fine and grey coloured.  
(ii) It hold lots of water.  
(iii) It is sticky in nature.  
(A) Clayey soil (B) Loamy soil  
(C) Sandy soil (D) Gravels
9. How can we tell if something is making sound even if we can't hear it?  
(A) The item will get larger. (B) The item will get smaller.  
(C) The item will be vibrating. (D) The item will disappear.

10. If ○ is called □, □ is called △, △ is called ◇ and ◇ is called ▱, then which is one of the faces of a ball?



#### Grade-3

1. D	2. B	3. A	4. D	5. B	6. B	7. B	8. A	9. C	10. B
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# Science Assessment

Curriculum & Sample Questions

4

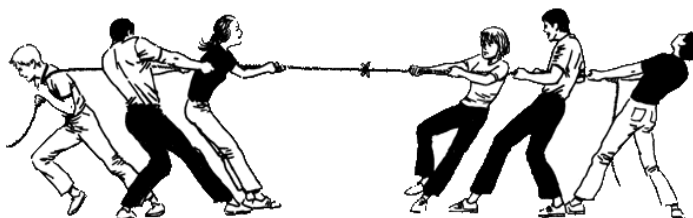
## CURRICULUM

Me and My Surroundings; Food and Nutrition; Plants; Animals and Birds; Matter and Material; Our Environment; Rocks and Minerals; Solar System; Work, Energy and Force; Ecosystem; Logical Reasoning

## Sample Questions

The Actual Question Paper Contains 30 MCQs, out of which 25 questions are based on Subject Knowledge and 5 are based on Logical Reasoning. The Duration of the Test Paper is 60 Minutes.

- The food we eat goes to the **T O M S A H C**. The food is changed into simple substances. This process is known as .  
 (A) Respiration (B) Excretion  
 (C) Digestion (D) None of these
- Select the group that applies to this statement "Carbohydrates are the nutrients that give us energy to do work". A physical labourer must eat more of these items regularly to get enough energy.  
 (A) Cheese, pulses, eggs, meat, fish (B) Oil, nuts, butter, meat  
 (C) Fruits, vegetables, juice, amla (D) Rice, wheat, potato
- If two teams play tug of war and both pull with equal force then \_\_\_\_\_.



- (A) Work is said to be done (B) No work is said to be done  
 (C) Double work is done (D) None of these
- What should be sprayed on stagnated water to prevent the breeding of mosquitoes?  
 (A) Water (B) Boiled water  
 (C) Oral dehydration (D) Kerosene oil
- The habit of sitting on their eggs by animals to keep them warm is called \_\_\_\_\_.  
 (A) Incubation (B) Reproduction  
 (C) Laying eggs (D) Metamorphosis

6. Neerja took water and dissolved few grams of salt in it. Later she placed the salty water under sunlight for five days. She found only crystals of salt but no water. Which process is demonstrated in the above experiment?

(A) Filtration (B) Boiling  
(C) Condensation (D) Evaporation

7. Identify me.

A gas you breathe out every second. Burning of paper, dead leaves and other materials also produce me. Green plants use me to make their food in the presence of sunlight.

(A) Oxygen (B) Water  
(C) Nitrogen (D) Carbon dioxide

8. Ankita noted features of an aquatic plant. Choose the plant that has these features.

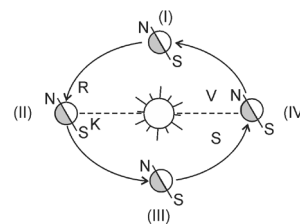
(i) Leaves of the plants are broad and flat with a coating on the surface.

(ii) Stem is long, hollow and present on the surface of water.

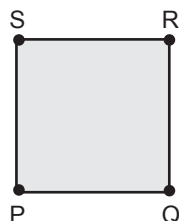
(A) Duckweed (B) Tape grass  
(C) Water hyacinth (D) Lotus

9. Choose the correct option, that best represents I, II, III and IV for the shaded region of the earth, as shown in the adjacent image.

(A) I–Autumn, II–Winter, III–Spring, IV–Summer  
(B) I–Spring, II–Summer, III–Winter, IV–Autumn  
(C) I–Summer, II–Winter, III–Autumn, IV–Spring  
(D) I–Autumn, II–Summer, III–Winter, IV–Spring



10. If P and Q interchange their position and S and R interchange their position. Then S and Q move diagonally and meet at the centre. P is in \_\_\_\_\_ of S.



(A) South-East (B) South-West  
(C) North-East (D) North-West

#### Grade-4

1. C	2. D	3. B	4. D	5. A	6. D	7. D	8. D	9. A	10. A
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# Science Assessment

## Curriculum & Sample Questions

### CURRICULUM

Plants; Animals and Birds; Human Body; Food, Health and Hygiene; Matter and Materials; Air, Water, and Weather; Space Science; Soil, Rock and Its Minerals; Environment and Natural Resources; Work, Force and Energy; Logical Reasoning

### Sample Questions

*The Actual Question Paper Contains 30 MCQs, out of which 25 questions are based on Subject Knowledge and 5 are based on Logical Reasoning. The Duration of the Test Paper is 60 Minutes.*

**1. Which one of the following statement is INCORRECT?**

- (A) The stem carries water and minerals from the roots to different parts of the plant.
- (B) The stems of the plants always remain above the ground.
- (C) The stem grows in the direction of light.
- (D) The stems of some plants are also used as food.

**2. Which symbol is commonly observed near the school and hospital?**



**3. A doctor kept records of breathing rates of people when they were resting. He made the chart given below. The chart suggests that \_\_\_\_\_.**

Person	Breathes in a minute
Baby boys	38
7 year old girls	25
7 year old boys	25
10 year old boys	20
Mothers	16

- (A) Boys breathe faster than girls
- (B) Girls breathe faster than boys
- (C) Older people breathe faster than younger people
- (D) Younger people breathe faster than older people

**4. What is the best definition of the food guide pyramid?**

- (A) A tool that helps in achieving a well balanced diet.
- (B) A tool that guides you to study hard.
- (C) A tool that guides you to find the perfect outfit.
- (D) A tool that guides you to develop a new fitness plan.

5. Michael discovers that a fish breathes less often in cool water. He correctly hypothesizes that \_\_\_\_\_.

- (A) The fish slows down in cool water, and does not need as much oxygen
- (B) The fish is eating, and does not have time to breathe as much
- (C) The fish is sleeping, and does not need as much oxygen
- (D) There is less oxygen in cool water, so the fish breathes slowly

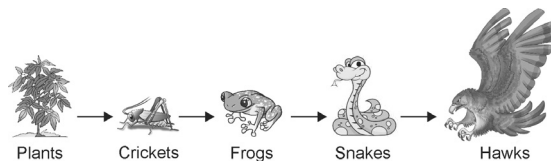
6. Which best explains why the sun appears brighter in the day than the stars appear at night?

- (A) The sun is much larger than the earth.
- (B) The sun is much larger than the other stars.
- (C) The sun is much hotter than the other stars.
- (D) The sun is much closer to the earth than other stars.

7. Why are most fossils found in sedimentary rocks?

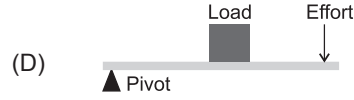
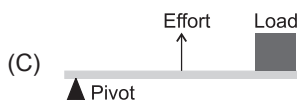
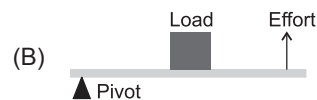
- (A) Sedimentary rocks are not very old.
- (B) Organisms live only in areas with sedimentary rocks.
- (C) Organisms can be preserved in sedimentary rocks.
- (D) Sedimentary rocks are found only at the surface of the ground.

8. Pair of predators shown in the diagram is \_\_\_\_\_.



- (A) Hawks and snakes
- (B) Hawks and plants
- (C) Frogs and crickets
- (D) Frogs and plants

9. Identify the third class lever.



10. If 'chair' is called 'table', 'table' is called 'furniture', 'furniture' is called 'desk', 'desk' is called 'almirah', 'almirah' is called 'bench', and 'bench' is called 'bed', then where the clothes are kept?

- (A) Table
- (B) Desk
- (C) Bench
- (D) Furniture

Grade-5

1. B	2. B	3. D	4. A	5. A	6. D	7. C	8. A	9. C	10. C
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# Science Assessment

## Curriculum & Sample Questions

### CURRICULUM

Food and its components; Fibre to Fabric; Sorting Materials Into Groups; Separation of Substances; Changes Around Us; Getting to Know Plants; Body Movements; The Living Organisms and their Surroundings; Motion and Measurement of Distances; Light, Shadows and Reflections; Electricity and Circuits; Fun with Magnets; Water; Air Around Us; Garbage In, Garbage Out; Logical Reasoning

### Sample Questions

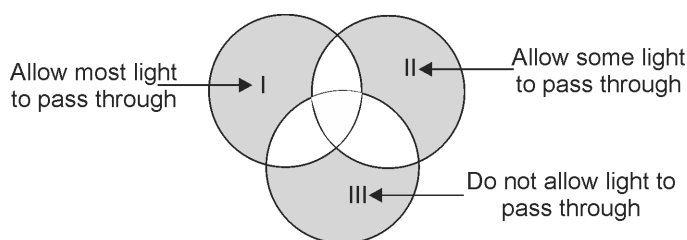
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1. **Assertion (A):** Nylon is not attacked by fungus and moths.

**Reason (R):** Nylon fibre are very strong.

- (A) Both (A) and (R) are correct and (R) is the correct explanation of (A).  
(B) Both (A) and (R) are correct but (R) is the incorrect explanation of (A).  
(C) (A) is correct but (R) is incorrect.  
(D) (A) is correct but (R) is incorrect.

2. Which of the following substance represents (III)?



- (A) Glass  
(B) A plastic bag  
(C) A paper bag  
(D) A flower vase
3. Which technique could be used to obtain the elements X and Y from the compound XY?
- (A) Filtration  
(B) Distillation  
(C) Electrolysis  
(D) Crystallisation
4. Which of the following statements are correct?
- (i) The male reproductive part of a flower is carpel.  
(ii) On cactus plant, the spines are modified leaves since they bear bud in their axils.  
(iii) Shoot helps the plant in fixing it firmly to the soil.  
(iv) Root absorbs water and minerals from the soil and supply it to the shoot.
- (A) (i), (ii) and (iii)  
(B) (i) and (ii)  
(C) (ii) and (iv)  
(D) (i) and (iii)

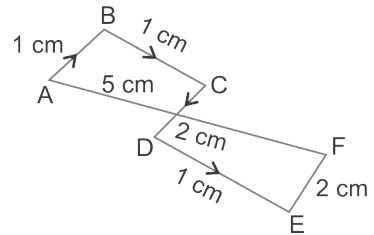
5. The adaptation that helps a polar bear to locate its prey is \_\_\_\_\_.

- (A) Its very strong sense of smell
- (B) Its long, curved and sharp claws
- (C) Its white fur that is not easily visible in the snowy white back ground
- (D) Layer of fat under its skin

6. A fly is moving on a paper and its movement is shown in the given diagram. How much distance is covered by the fly?

[Distance AB = 1 cm, BC = 1 cm, CD = 2 cm, DE = 1 cm, EF = 2 cm, AF = 5 cm]

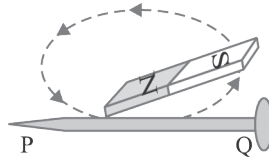
- (A) 3 cm
- (B) 5 cm
- (C) 7 cm
- (D) 2 cm



7. Rajesh has two bulbs connected across two cells in a simple circuit. How can he make the bulbs glow dimmer?

- (A) Replace one cell with a piece of chalk
- (B) Replace one cell with a piece of wire
- (C) Replace one bulb with a piece of wire
- (D) Replace one bulb with another cell

8. A nail is magnetized as shown in the figure. Which polarity will develop at P and Q?



- (A) P-North, Q-North
- (B) P-North, Q-South
- (C) P-South, Q-South
- (D) P-South, Q-North

9. Which type of motion do the wheels of a moving car exhibit?

- (A) Rectilinear
- (B) Oscillatory
- (C) Non-periodic
- (D) Translatory

10. Pointing to a photograph Yashika says, "He is the son of the only son of my grandfather." How is the man in the photograph related to Yashika?

- (A) Brother
- (B) Uncle
- (C) Cousin
- (D) Data is inadequate

Grade-6

1. B	2. D	3. C	4. C	5. A	6. C	7. B	8. B	9. A,D	10. A
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# Science Assessment

## Curriculum & Sample Questions

### CURRICULUM

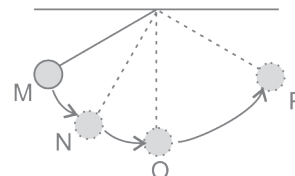
Nutrition In Plants; Nutrition in Animals; Fibre to Fabric; Heat; Acid, Base and Salts; Physical and Chemical Changes; Weather, Climate and Adaptations of Animals to Climate; Winds, Storms and Cyclones; Soil; Respiration in Organisms; Transportation in Animals and Plants; Reproduction in Plants; Motion and Time; Electric Current and Its Effects; Light; Water: Our lifeline; Wastewater Story; Logical Reasoning

### Sample Questions

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1. If time taken by the bob to move from M to N is  $t_1$ , and from N to O is  $t_2$ , then the time period of this simple pendulum is

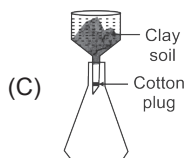
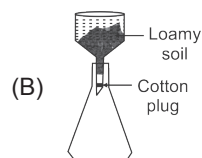
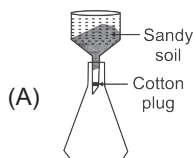
- (A)  $t_1 + t_2$  (B)  $2 t_1 + t_2$   
(C)  $2 (t_1 + t_2)$  (D)  $4 (t_1 + t_2)$



2. Richa used a concave mirror to get an image of the sun on a paper. What kind of image will she get?

- (A) Virtual (B) Real  
(C) Enlarged (D) Real and enlarged

3. An experiment is conducted between sandy, loamy and clay soil to check the retention of water. Which sample of soil will retain more water?



- (D) All have same retention rate

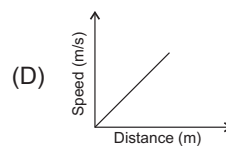
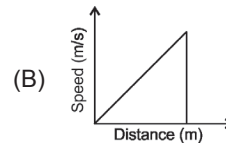
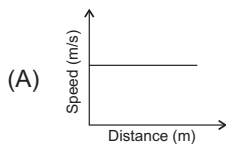
4. Which of the following diagram of tongue is correctly labelled?



5. What happens to the rib cage and diaphragm, when a person breathes in?

	Rib cage	Diaphragm
(A)	Moves outwards and upwards	Becomes more curved
(B)	Moves outwards and upwards	Becomes flatten
(C)	Moves downwards and inwards	Becomes more curved
(D)	Moves downwards and inwards	Becomes flatten

6. Speed-time graph of a body performing uniform motion which came to rest suddenly is \_\_\_\_\_.



7. Four bulb of 100W each are connected in series to a battery of 220V. If two of the bulbs are replaced by 60W bulbs then the brightness of the remaining bulbs will \_\_\_\_\_.

- (A) Remain same (B) Get dimmer  
(C) Stop illuminating (D) Glow brighter

8. Find the correct statement.

- (A) Oceans are the main source of water. (B) Drip irrigation helps in saving water.  
(C) Rivers are the only source of fresh water. (D) Sun has no role in water cycle.

9. Three siblings Prisha, Disha and Aahan carry water bottles in their school bag.

- Prisha covers it with a bubble wrap.
- Disha covers it with a plastic bag.
- Aahan covers it with an aluminium foil.

Whose water will not remain cool for long?

- (A) Prisha's (B) Disha's  
(C) Aahan's (D) Will remain cool for equal timings

10. Which of the following Venn diagrams depicts the relationship amongst, "Prism, Cuboid, Triangle"?



Grade-7

1. D 2. B 3. C 4. D 5. B 6. C 7. B 8. B 9. B,C 10. C

# Science Assessment

## Curriculum & Sample Questions

### CURRICULUM

Crop Production and Managements; Microorganisms-Friend and Foe; Synthetic Fibres and Plastics; Materials-Metals and Non-Metals; Coal and Petroleum; Combustion and Flame; Conservation of Plants and Animals; Cell Structure and Functions; Reproduction in Animals; Reaching the Age of Adolescence; Force and Pressure; Friction; Sound; Chemical Effects of Electric Current; Some Natural Phenomena; Light; Stars and the Solar System; Pollution of Air and Water; Logical Reasoning

### Sample Questions

*The Actual Question Paper Contains 40 MCQs, out of which 32 questions are based on Subject Knowledge and 8 are based on Logical Reasoning. Out of 32 subject based questions, 7 questions have 2 keys (answers). The Duration of the Test Paper is 60 Minutes.*

- Identify the step that does NOT help in improving the soil fertility.
  - Growing leguminous plants.
  - Practice of growing different crops in the same field in succession.
  - Growing the same crop every time in the same field.
  - Not to cultivate crop for one or more than one season in the field.
- Riya and Rubal are good friends, and they like watching cookery shows together. One day, while watching the show they decided to make lemon pickle. After making lemon pickle, Riya kept it in an aluminum container and Rubal kept it in a glass container. After a month, pickle of one of them got spoiled. Identify whose pickle got spoiled and why?
  - Rubal's because glass reacts with acids present in pickle.
  - Riya's because metals reacts with acids present in the pickle.
  - Both's, as they might have made mistake in preparation.
  - Riya's because metal container won't get sunlight.
- Which of the following shows rapid combustion?
  - Matchstick burns on being struck against the sides of a match box.
  - Burning of phosphorus and sulphur at room temperature.
  - Burning of the crackers and bomb.
  - All of these
- Read the following statements and identify the cell to which it indicates.
 

**Statement-1:** Cells do not have plastids.

**Statement-2:** These cells have smaller vacuoles in comparison to other types of cells.

**Statement-3:** These cells lacks cell wall.

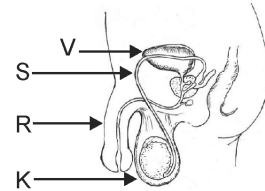
(A) Virus	(B) Nucleus
(C) Plant cells	(D) Animal cells

5. Why are mica sheets used in iron instruments?

- (A) Mica is good conductor of electricity.
- (B) Mica is bad conductor of electricity.
- (C) Mica is bad conductor of electricity but good conductor of heat.
- (D) Mica is very light and bad conductor of electricity.

6. Which marked part of the male reproductive system produces male gametes?

- (A) R
- (B) K
- (C) S
- (D) V



7. Blood comes out from the nose of mountaineers because of \_\_\_\_\_.

- (A) Low atmospheric pressure and high blood pressure of the body
- (B) Low atmospheric pressure and low blood pressure of the body
- (C) High atmospheric pressure and high blood pressure of the body
- (D) High atmospheric pressure and low blood pressure of the body

8. Simi, Seema, Sam and Sonu gave following statements, when their science teacher asked the below given question.

**Question:** Which type of image is formed by a plane mirror?

**Choose the correct statement.**

- (A) **Simi said:** Virtual and enlarged
- (B) **Seema said:** Virtual and of the same size of the object
- (C) **Sam said:** Real and of the same size of the object
- (D) **Sonu said:** Real and enlarged

9. Which of the following are correct about petroleum?

- (A) Its reserves are more likely to be found in mountainous regions than in the seas or rivers.
- (B) Petrol is lighter than water.
- (C) A source of petroleum is also likely to be source of natural gas.
- (D) Petroleum has a pleasant odour.

10. Shivam and Varun want to visit the museum after their exam. Shivam's exam finishes on 9<sup>th</sup> April and he is leaving for a holiday on 12<sup>th</sup> April. Varun's exam will be over by 10<sup>th</sup> April after which he is free. On which of the following dates can the two definitely meet?

- (A) 10<sup>th</sup> April
- (B) Either 10<sup>th</sup> or 11<sup>th</sup> April
- (C) 11<sup>th</sup> April
- (D) Either 11<sup>th</sup> or 12<sup>th</sup> April

Grade-8

1. C	2. B	3. A	4. D	5. C	6. B	7. A	8. B	9. B,C	10. C
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# Science Assessment

## Curriculum & Sample Questions

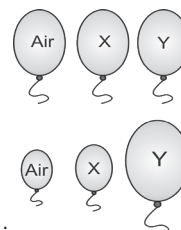
### CURRICULUM

Matter in Our Surroundings; Is matter around us Pure?; Atoms and Molecules; Structure of the Atom; The Fundamental Unit of Life; Tissues; Diversity in Living Organisms; Motion; Force and Laws of Motion; Gravitation; Work and Energy; Sound; Why Do We fall Ill?; Natural Resources; Improvements in Food Resources; Logical Reasoning

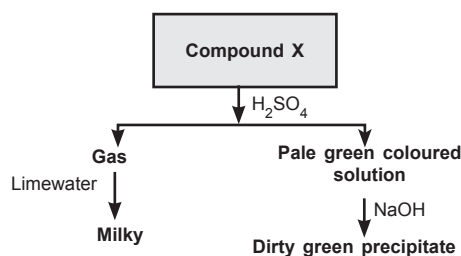
### Sample Questions

*The Actual Question Paper Contains 50 MCQs, out of which 40 questions are based on Subject Knowledge and 10 are based on Logical Reasoning. Out of 40 subject based questions, 15 questions have 2 keys (answers). The Duration of the Test Paper is 60 Minutes.*

1. Three balloons are filled with equal volume of air, gas 'X' and gas 'Y'. Then they are left at room temperature for one day. As balloons are made of porous material which allow the gas molecules to move in and out. It was found that balloons containing air and gas 'X' became smaller but the balloon containing gas 'Y' became larger. What could be the possible reason behind it?

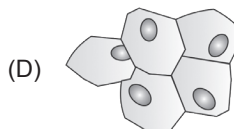
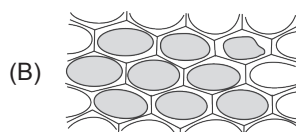
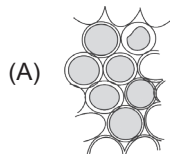


- (A) 'X' diffuses faster than air  
(B) 'Y' diffuses slower than air  
(C) 'X' has higher molecular mass than Y  
(D) 'Y' diffuses faster than air
2. A mixture of Sulphur and Carbon disulphide is \_\_\_\_\_ and it does \_\_\_\_\_ effect.  
(A) heterogeneous, show Tyndall effect  
(B) homogeneous, show Tyndall effect  
(C) heterogeneous, not show Tyndall effect  
(D) homogeneous, not show Tyndall effect
3. The scheme represents the sequential reactions of a compound 'X'. Identify compound 'X'.



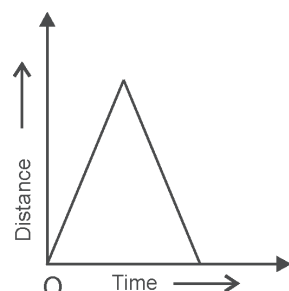
- (A) Iron filings  
(B) Iron (II) carbonate  
(C) Iron (III) carbonate  
(D) Copper (II) carbonate
4. Which of the following cell organelles show extensive polymorphism?  
(A) Dictyosomes  
(B) Ribosomes  
(C) Endoplasmic reticulum  
(D) Chloroplast

5. Which of the following diagrams is correct for cheek cells?



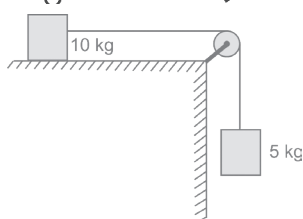
6. Observe the distance-time graph shown alongside. Which of the following statements correctly describes the motion of the object?

- (A) A stone is dropped down from the top.  
 (B) A stone is thrown vertically upwards.  
 (C) A stone is thrown vertically upwards and coming downwards after attaining maximum height.  
 (D) A stone is rotated in circular motion with the help of a thread.



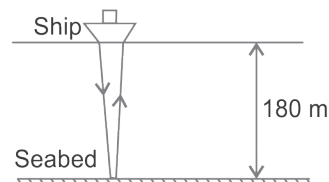
7. Two masses 10 kg and 5 kg respectively, are connected by a string passing over a frictionless pulley fixed at the corner of the table. The coefficient of friction of 10 kg mass with the table is 0.2. The minimum mass 'M' that may be placed on it to prevent it from moving is equal to \_\_\_\_\_.

- (A) 0 kg  
 (B) 5 kg  
 (C) 10 kg  
 (D) 15 kg



8. A sound wave is emitted downward from a ship. The sound wave is reflected from the seabed and is detected as it arrives back at the ship as shown in the diagram. The time between emitting the sound wave and detecting it back at the ship is 0.25s. The seabed is 180 m below the ship. The speed of sound is \_\_\_\_\_.

- (A) 144 m s<sup>-1</sup>  
 (B) 1440 m s<sup>-1</sup>  
 (C) 720 m s<sup>-1</sup>  
 (D) 72 m s<sup>-1</sup>



9. Which of the following statements are correct?

- (A) The nerve impulse is self propagating.  
 (B) Muscular contractions takes place after calcium ions are released.  
 (C) When calcium ions are actively transported back into the storage sacs, muscular contractions take place.  
 (D) Phenylketonuria is not an autosomal recessive disorder.

10. Five passengers are standing in a row, P<sub>5</sub> is sitting next to P<sub>3</sub> and P<sub>2</sub> is sitting next to P<sub>4</sub>. P<sub>1</sub> is not next to P<sub>2</sub> or P<sub>3</sub>. If P<sub>4</sub> is on the extreme left, who are adjacent to P<sub>5</sub>?

- (A) P<sub>2</sub> and P<sub>3</sub>  
 (B) P<sub>4</sub> and P<sub>3</sub>  
 (C) P<sub>3</sub> and P<sub>1</sub>  
 (D) P<sub>1</sub> and P<sub>4</sub>

#### Grade-9

1. B	2. C	3. B	4. A	5. D	6. C	7. D	8. B	9. A,B	10. C
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## Science Assessment

Curriculum & Sample Questions

### CURRICULUM

Chemical Reactions and Equations; Acids, Bases and Salts; Metals and Non-metals; Carbon and Its Compounds; Periodic Classification of Elements; Life Processes; Control and Coordination; How do Organisms Reproduce?; Heredity and Evolution; Light-Reflection and Refraction; Human Eye and Colourful World; Electricity; Magnetic Effects of Electric Current; Source of Energy; Our Environment; Management of Natural Resources, Logical Reasoning

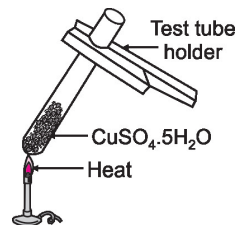
### Sample Questions

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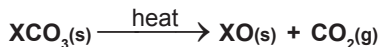
1.  $a\text{Cu} + b\text{HNO}_3(\text{dil}) \longrightarrow c\text{Cu}(\text{NO}_3)_2 + d\text{NO} + e\text{H}_2\text{O}$ ; where  $a, b, c, d$  and  $e$  respectively, for a balanced chemical equation are \_\_\_\_\_.
- (A) 2, 8, 2, 2, 4 (B) 3, 8, 3, 2, 4  
(C) 1, 2, 3, 2, 4 (D) 3, 4, 3, 2, 2

2. What happens when hydrated Copper sulphate is heated strongly? Identify the correct observation(s).

- (A) Blue colour changes to colourless and finally black solid is left as residue and pungent smelling gas comes out.  
(B) Blue colour changes to white.  
(C) Blue colour remains as it is.  
(D) Blue colour changes to green.



3. The reactivity of metals 'X' and 'Y' and their compounds are as follow



'X' and 'Y', respectively are \_\_\_\_\_.

- (A) Mg, Cu (B) Zn, Al  
(C) Al, Zn (D) Pb, Cu
4. A hydrocarbon 'X' (molar mass 28) and carbon 86% reacts with water in the presence of Sulphuric acid to form 'Y' with specific smell and burning taste, it liberates hydrogen with sodium metal. 'X' and 'Y', respectively are \_\_\_\_\_ and \_\_\_\_\_.
- (A)  $\text{C}_2\text{H}_5\text{OH}$ ,  $\text{C}_2\text{H}_2$  (B)  $\text{C}_2\text{H}_4$ ,  $\text{C}_2\text{H}_5\text{OH}$   
(C)  $\text{C}_2\text{H}_6$ ,  $\text{C}_2\text{H}_5\text{OH}$  (D)  $\text{C}_2\text{H}_2$ ,  $\text{C}_2\text{H}_5\text{OH}$

5. I have a basal cell which forms 6 to 10 suspensor. My terminal cell produces embryo but not the radicle. My first terminal cell division is longitudinal. My plumule is terminal and lies between two elongated cotyledons. Who Am I?

- (A) Monocot embryo (B) Dicot embryo  
(C) Perisperm (D) Endosperm

6. When a heterozygous dominant is crossed with homozygous recessive, then the ratio of progeny will be\_\_\_\_\_.

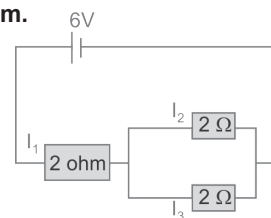
- (A) 1 : 2 (B) 2 : 1  
(C) 3 : 1 (D) 1 : 1

7. The type of mirror used in I-headlight of a car, II-rear view mirror of vehicle, III-solar furnace, IV-shaving mirror are\_\_\_\_\_.

- (A) I-concave, II-convex, III-concave, IV-plane (B) I-plane, II-convex, III-concave, IV-concave  
(C) I-convex, II-concave, III-convex, IV-plane (D) I-plane, II-concave, III-convex, IV-concave

8. Find the value of  $I_1$ ,  $I_2$  and  $I_3$ , respectively for the given circuit diagram.

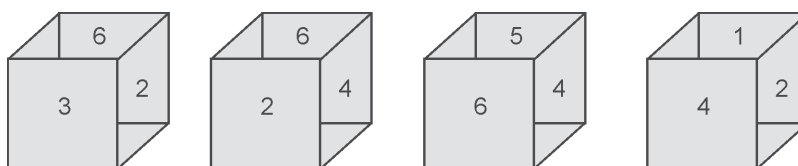
- (A) 3A, 1.5A, 1.5A  
(B) 2A, 4A, 4A  
(C) 3A, 2A, 4A  
(D) 1.5A, 1.5A, 1.5A



9. Which of the following statements are correct?

- (A) All green plants and blue green algae are producers.  
(B) Green plants get their food from organic compounds.  
(C) Producers prepare their own food from inorganic compounds.  
(D) Plants convert chemical energy into solar energy.

10. Which number is on the face opposite to 6?



- (A) 4 (B) 1  
(C) 2 (D) 5

#### Grade-10

1. B	2. C	3. A	4. B	5. B	6. D	7. A	8. A	9. A,B	10. B
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