



# UNICUS OLYMPIADS

## Sample Paper (2020-21)

**Class 8**

**Unicus Science Olympiad**



<b>Section – Class*</b> <small>*Syllabus covered</small>	<b>Total Questions</b>	<b>Marks per Questions</b>	<b>Total Questions</b>
Classic Section – Class 7	28	1	28
Classic Section – Class 6	12	1	12
Scholar Section – Class 7	7	2	14
Scholar Section – Class 6	3	2	6
<b>Grand Total</b>	<b>50</b>		<b>60</b>

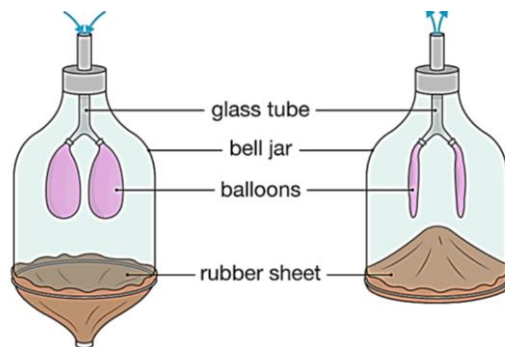
1. Which of the following statements is correct regarding formation of rust and formation of ice?
- a) Formation of rust is a chemical change while formation of ice a physical change.
  - b) Both formation of rust and ice is a physical change.
  - c) Both formation of rust and ice is a chemical change.
  - d) Formation of rust is a physical change while formation of ice a chemical change.

**Correct Answer: a**

*1 Mark*

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2. Figure below shows an activity to demonstrate the mechanism of breathing.



Carefully read the following observations of the above activity and choose the correct option:

- 1. When the rubber sheet is pulled down, the small balloons expand.
  - 2. When the rubber sheet is released, the small balloons contract.
- a) Expansion of lungs during exhalation is similar to the expansion of small balloons and contraction of lungs during inhalation is similar to the contraction of small balloons.
  - b) Expansion of lungs during inhalation is similar to the expansion of small balloons and contraction of lungs during exhalation is similar to the contraction of small balloons.
  - c) Expansion of lungs during exhalation is similar to the contraction of small balloons and contraction of lungs during inhalation is similar to the expansion of small balloons.
  - d) Contraction of lungs during exhalation is similar to the expansion of small balloons and expansion of lungs during inhalation is similar to the contraction of small balloons.

**Correct Answer: b**

*1 Mark*

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3. Four students made the following statements regarding the transpiration in leaves:

Sunita: It is responsible for keeping the plant cool.

Divya: It gives leaves their green colour.

Kavya: It causes minerals to travel up from the roots to the leaves.

Preeti: It causes the movement of water from roots to the leaves.

Who among them is/are correct?

- a) Sunita only  
b) Divya only  
c) Both Kavya and Divya  
d) Sunita, Kavya and Preeti

**Correct Answer: d**

*1 Mark*

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4. The following table gives the odometer readings of a bus at different times of its journey. What is the average speed of the bus?

Time	Odometer reading
10:00 AM	48850 km
10:30 AM	48870 km
11:00 AM	48890 km
11:30 AM	49010 km
12:00 PM	49022 km

- a) 86 km/h  
b) 172 km/h  
c) 56 km/h  
d) 68 km/h

**Correct Answer: a**

*1 Mark*

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5. Rashmi tested the soil from her garden. She mixed the soil with water and dipped a blue litmus in it, she noticed that the litmus turned red. Which of the following should she add to her garden soil to get better plant growth?

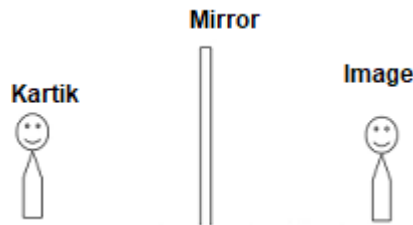
- a) Hydrochloric acid  
b) Slaked lime  
c) Lime  
d) Salt

**Correct Answer: b**

*1 Mark*

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6. Kartik stand in front of a plane mirror. The distance between Kartik and his image in the plane mirror is 20 m. How much distance should he move in order to get the distance of 15 m between herself and her image?



- a) 7.5 m away from the mirror  
 b) 2.5 m away from the mirror  
 c) 7.5 m towards the mirror  
 d) 2.5 m towards the mirror

**Correct Answer: d**

*1 Mark*

7. Choose the correct option and complete the following table:

Methods	Layering	Grafting	Cutting	Tissue culture
Examples	A	B	C	D

- a) A – Apple, B – Jasmine, C – Asparagus, D – Mango  
 b) A – Sugarcane, B – Rubber plant, C – Guava, D – Rose  
 c) A – Guava, B –Cherry, C – Asparagus, D – Mango  
 d) A – Strawberry, B – Mango, C – Bougainvillea, D – Orchids

**Correct Answer: d**

*1 Mark*

8. A mixture is made up of three components A, B and C. Particles of A are heavy, insoluble and non-magnetic. Particles of B are very light and non-magnetic. Particles of C are magnetic in nature. Identify the method to separate A, B and C:

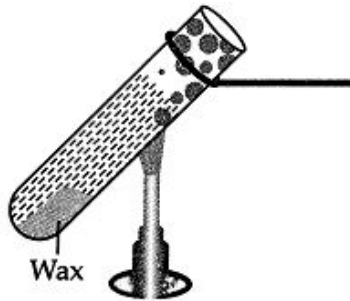
- a) Magnetic separation and winnowing  
 b) Winnowing and threshing  
 c) Hand-picking and magnetic separation  
 d) Sieving and winnowing

**Correct Answer: a**

*1 Mark*

9. Yogita dipped a small nail in molten wax and dropped it in a test tube containing water. She then heated the top of the test tube by holding it above the flame.

What will happen after some time?



- a) The water at the top will begin to boil and the wax will start melting as water is a good conductor of heat.
- b) The water at the top will begin to boil but the wax will not melt as water is a bad conductor of heat.
- c) The water at the bottom of the test tube will begin to boil as water is a good conductor of heat.
- d) Wax will start melting but the water at the bottom of the test tube will not experience any increase in temperature as water is a bad conductor of heat.

**Correct Answer: b**

*2 Marks*

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10. Consider the following adaptations found in the desert plants and animals:

- 1. Most desert plants have long roots that go deep into the soil to absorb water.
- 2. Many desert animals like desert kangaroo rats remains inactive during the night and keep themselves buried deep in their burrows.
- 3. Camel has a hump which stores water and can stay without water for a long time.
- 4. Desert plants lose very little water through transpiration.

Which of the above adaptation is/are correct?

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

**Correct Answer: b**

*2 Marks*