



# 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>

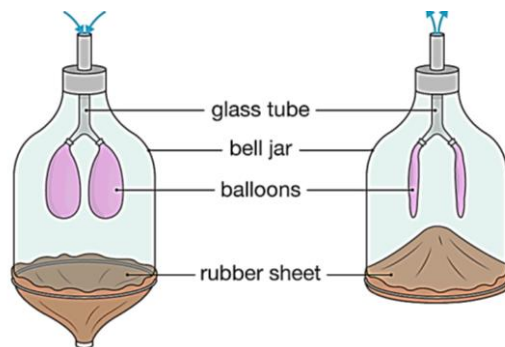
1. Which of the following statements is correct regarding formation of rust and formation of ice?
- a) Formation of rust is a chemical change while formation of ice a physical change.
  - b) Both formation of rust and ice is a physical change.
  - c) Both formation of rust and ice is a chemical change.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

c) Both Kavya and Divya

b) Divya only

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

c) 56 km/h

b) 172 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

c) Lime

b) Slaked lime

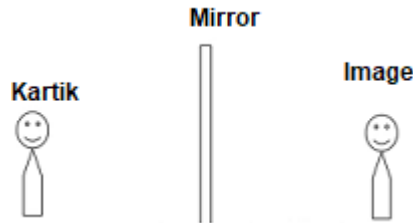
d) Salt

**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:

<b>Methods</b>	Layering	Grafting	Cutting	Tissue culture
<b>Examples</b>	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:

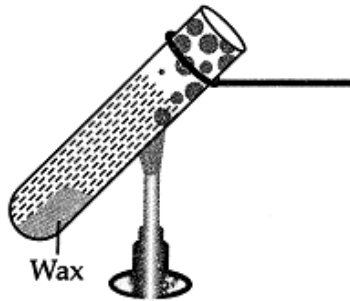
- a) Magnetic separation and winnowing                      b) Winnowing and threshing  
 c) Hand-picking and magnetic separation                      d) Sieving and winnowing

**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*