

Carmel Convent School
Class IX Unit 1
Sub: Science

Date: 17.05.2024

M.M. 20
TIME: 45 mins

Chemistry

[1]

1. Ice floats on water because

(a) it has higher density than water.

(b) it has lower density than water due to more volume.

(c) it is solid.

(d) it is low melting solid.

2. Shivam visited an LPG unit and found that the gas can be liquified at specific conditions of temperature and pressure. Help him to identify the correct set of conditions.

[1]

(a) High temperature and high pressure.

(b) Low temperature and low pressure.

(c) Low temperature and high pressure.

(d) High temperature and low pressure.

Directions: In the following Questions, the Assertion and Reason have been put forward. Read the statements carefully and choose the correct alternative from the following:

(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

(b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

(c) Assertion is true but the Reason is false.

(d) The statement of the Assertion is false but the Reason is true.

3. Assertion: Molten ionic solid conducts electricity.

[1]

Reason: On melting ions, become free to move. A

4. Assertion: We feel more cold after taking bath with hot water. False

[1]

Reason: Evaporation of hot water takes place faster which causes cooling. D

301°

20
20

[3]

5. Convert 574 K to the Celsius scale. 301°C

a. What will be the state of water at:

- (i) 108°C gaseous
- (ii) 275 K 2°C \rightarrow liquid
- (iii) 370 K 97°C \rightarrow liquid

273
97

16
370
- 273
97

b. Give reason-why water at room temperature is a liquid?

Physics

1. Starting from a stationary position Rajeev peddled his bicycle so as to attain a velocity of 10m/s in 25 seconds. His uniform acceleration is [1]

- a. 2.5m/s^2 b. 0.4 m/s^2 c. 0.25m/s^2 d. 4 m/s^2

2. An athlete complete one round of circular track of radius R in 40 seconds. What will be his displacement at the end of 2 min 20 seconds. [1]

- a. Zero b. $2R$ c. $2\pi R$ d. $7\pi R$

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- d) The statement of the Assertion is false but

$\frac{2}{9}$ $\frac{4}{10}$

The Reason is true. [1]

3. Assertion: The slope of distance time graph gives acceleration of the body. F
Reason: Greater the slope of distance time graph more is the speed of the body. T
D)

4. Assertion: Speed of an object can be negative. F [1]

Reason: Speed is defined as distance covered by an object in unit time. T
D)

5. a. Define average speed. [3]

34.28 km/h

b. A bus travels a distance of 120 km with a speed of 40 km/h and returns with a speed of 30 km/h. Calculate the average speed for the entire journey.

Biology

1. The cell organelles (other than the nucleus) which contain DNA are

- (a) plastids and lysosomes [1]
- (b) mitochondria and Golgi apparatus
- (c) Golgi apparatus and lysosomes
- (d) plastids and mitochondria

2. If a plant cell is kept in a hypotonic solution, it will

[1]

- (a) increase in its volume
- (b) maintain the same volume
- (c) decrease in its volume
- (d) burst

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3. Assertion: Living organisms are composed of cells and products of cells. [1]

Reason: All cells arise from pre-existing cells. A)

4. Assertion: Plant cells contain two types of plastids, chromoplasts and leucoplasts. [1]

Reason: Animal cell contains only 1 type of plastid i.e. leucoplast. F D)

5. What does DNA molecule contain? Name the functional segment of DNA. In which form is the DNA present in a cell when the cell is not dividing? [2]

The End