

CARMEL CONVENT SCHOOL

UNIT TEST – I (2023-24)

SUBJECT: SCIENCE CLASS – IX

MM: 20

TIME: 1 HR

Chemistry

- ✓ Q1. Change the following Celsius temperatures to Kelvin scale: 2
(i) $-273\text{ }^{\circ}\text{C}$ ~~OK~~ (ii) $+30\text{ }^{\circ}\text{C}$ 303 K
- ✓ Q2. Which gas is called dry ice? Why? 1
- ✓ Q3. List the three characteristics of particles of matter. 2
- ✓ Q4. State one difference between gas and vapour with two examples. 2

Physics

- ✓ Q1. A train starting from a railway station attains a velocity of ~~30~~ 30 m/s in one minute. What is its acceleration? -0.5
2
- X ✓ Q2. The length of minute hand of a clock is 14 cm . Calculate the speed with which the tip of the minute hand moves. 0.234 m/s 'or' 0.234 m/s 2
- ✓ Q3. Distinguish between uniform and non-uniform acceleration. Give example. 2

(Bio)

1. a. Draw a neat and well labelled diagram of the Plant cell.
b. What are the functions of
(i) Lysosomes
(ii) nucleolus? (3)

CCT Based

A cell is a mass of cytoplasm that is bound externally by a cell membrane. Usually microscopic in size, cells are the smallest structural units of living matter and compose all living things. Most cells have one or more nuclei and other organelles that carry out a variety of tasks. For example the function of plasma membrane is inter cellular transport that refers to the collection of mechanisms that regulate the passage of solutes such as ions and small molecules through biological membranes, which are lipid bilayers that contain proteins embedded in them.

$$\begin{array}{r} 303 \\ - 30 \\ \hline 273 \end{array}$$
$$\begin{array}{r} 273 \\ + 30 \\ \hline 303 \end{array}$$

- ✓1. Who discovered the nucleus of the cell?
- ✓2. Name the process by which biological membranes are formed?
- ✓3. If potato slices are placed in sucrose solution, after an hour the sucrose solution becomes sweeter than it was before the slices were put in it. Water potential of potato tubers is

✓(a) greater than that of sucrose solution

(b) equal to that of sucrose solution

(c) less than that of sucrose solution

(d) equal to the osmotic pressure of sucrose solution

- ✓4. Bacteria cannot survive in a highly salted pickle because

(a) salt inhibits reproduction

(b) bacteria do not get enough light for photosynthesis

✓(c) they become plasmolyzed and consequently killed

(d) the pickle does not contain nutrients necessary for bacteria to live

(4)

$$30 \overline{) 70} \\ \underline{60} \\ 10$$

$$0.5 \\ 2 \overline{) 10} \\ \underline{10} \\ 0 \\ 233 \\ 30 \overline{) 70} \\ \underline{60} \\ 100 \\ \underline{90} \\ 100 \\ \underline{90} \\ 10$$