

9/10/20

VII

1. Q. What are the different types of solids? Define each of them with an example.

Ans:- Solids can be divided into two types —

- (i) Crystalline solid
- (ii) Amorphous solid.

(i) Crystalline solid

The solids in which the molecules are arranged in a definite geometric pattern, has shining surface, can reflect the light, are called as crystalline solids.

Ex →  $\text{CuSO}_4$ ,  $\text{CaF}_2$ ,  $\text{KCl}$ ,  $\text{CuCl}_2$  etc.

(ii) Amorphous solids

The solids in which the molecules are not arranged in a systematic order, no definite geometrical shape and are in powder form, are called as amorphous solids.

Ex → Plastic, gel, rubber, Butter etc.

Q When the common salt is kept in an open container for a longer time, it gets wet — Why?

Common salt i.e.  $\text{NaCl}$  contains some impurities of  $\text{MgCl}_2$  or  $\text{CaCl}_2$ , which are deliquescent in nature, can absorb the moisture easily from the atmosphere and the salt gets wet i.e. sticky.

## Role of Sodium within the body

100ml of human blood contains 0.9 gram of NaCl. Too high or too low concentration of  $\text{Na}^+$  within our body can lead to various problems. When concentration of Na is high, it is excreted through urine.

Hyponatremia → Low level of sodium within the body.

Hypernatremia → Higher level of sodium within the body.

## Function of Sodium

### (i) Blood Pressure

Sodium ions attract water molecules & increase the volume of the blood. But our blood vessels cannot expand to accommodate the extra water molecules. Hence blood pressure increases. So the persons suffering from high blood pressure are advised to consume less salt through their diet.

## (ii) Muscle and nerve function

Excessive sweating on a hot, & humid summer day & through urine, Sodium ions will be lost regularly, may lower its concentration. Low level of Na ion can cause muscle spasms, cramps headache, restlessness, nausea, irritability, confusion etc.

If the concentration is too low, the person may pass on to coma. Higher conc. of Na ion can cause lethargy and restlessness.

## Role of Ca within the body

- (i) Ca is an important element for the growth & development of bones & teeth in children.
- (ii) As we grow old, the extent of absorption of Ca from food within the body decreases. As a result the <sup>become weaker &</sup> bones tend to get fractured at any time, called as osteoporosis.
- (iii) 99% of the body's Ca is found in bones & teeth. Vitamin D is needed to absorb Ca properly in the body.

Serial No.

61983232



পশ্চিমবঙ্গ উচ্চ মাধ্যমিক শিক্ষা সংসদ WEST BENGAL COUNCIL OF HIGHER SECONDARY EDUCATION উচ্চমাধ্যমিক পরীক্ষা/একাদশ শ্রেণির বার্ষিক পরীক্ষা ২০ ..... Higher Secondary Examination/Class-XI Annual Examination 20 ..... বিষয় / Subject <input type="text"/>	..... Signature of invigilator with date ..... নিশ্চিত ও প্রতিস্বাক্ষরিত Countersigned on verification
---	--

রেজিস্ট্রেশন নম্বর / Registration No.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------	----------------------

(iv) Sources of Ca

Milk, cheese, broccoli, cabbage, small fishes with bones, soya milk, common salt contains Ca as impurity, curd etc.