18/4/23

Physical and Chemical change

Q 1. Write the difference between the following with one example of each.

a) Slow and fast change
b) Natural and mans-made change
c) Periodic and non-periodic change
d) Reversible and irreversible change.

Q 2. State any four characteristics of a physical ~~and chemical~~ change.

Ans 1. a)

Slow change	Fast change
Changes that takes longer time to complete is called slow change eg - change of season, rusting	Changes that takes short period of time to complete is called fast change eg - burning of paper

b.

Natural	Manmade
Changes that takes place in nature by themselves are called natural change. eg - earthquakes, eruption of volcanoes	Chages that occurs due to human efforts is called man-made changes. eg - cooking food, formation of steel

Periodic	Non periodic
changes that are repeated at regular intervals of time are called periodic changes	changes that are not repeated at regular intervals are called non-periodic changes.
eg - Change of day and night, change of season	eg - Earthquakes, an epidemic
Reversible	Irreversible
Change that can be reversed is called reversible change	Change that cannot be reversed is called irreversible change.
eg - water to ice, water to steam	eg - Burning of paper, rusting

Q

Ans 2. • No new substances is formed.
• The change is temporary and it can be reversed by reversing the conditions.
• There is usually no loss or gain of energy as a result of physical change.
• There is no change in mass of the substance.

Q 3. Give reasons:

a) Freezing of water to ice and evaporation of water are physical change.
Water at ~~liquid~~ normal conditions is liquid. We freeze it ~~s~~ it changes into ~~water~~ ice and when we evaporate it, it changes into steam. Though, they all are in different states they are water. There ~~chemi~~ chemical composition is same.

b) Burning of a candle is both a physical and chemical change
Burning of candle is both a physical and chemical change. This is ~~not~~ because when we burn a candle wax near the flame melts to form molten wax. ~~When~~ At the same time ~~when~~ the wink burns to give carbon dioxide and water vapour.

c) Burning of papes is a chemical change. This is because ~~the~~ when we burn paper it changes into ~~ice~~ ash which ~~has~~ is completely different from ~~the~~ ~~bata~~ paper.

d) Cutting of a cloth piece is a ~~then~~ physical change through it cannot be reversed.

ans. Cutting of ~~a~~ cloth piece is a physical change because ~~it~~ the cut pieces of cloth has same chemical and physical properties as the cloth

5. Give 4 differences between physical and chemical changes.

Physical change	Chemical change
1. In physical change, no new substance is formed and the chemical composition of the substance remains the same. These are changes only in ~~pp~~ physical properties and state.	In a chemical change a new substance with entirely different chemical ~~st~~ composition and ~~pp~~ properties is formed
2. The change can be reversible or irreversible	The change is permanent.
3. The change can be reversed by simple physical methods	The change cannot be reversed by simple physical methods

4.	Heat or light energy may or may not be released	Heat or light energy are given out or absorbed.