

Chapter 6

General Principles and Processes of Isolation of Elements

(Assertion and Reason Questions)

Directions: These questions consist of two statements, each printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses.

- (a) If both Assertion and Reason are correct and the Reason is a correct explanation of the Assertion.
- (b) If both Assertion and Reason are correct but Reason is not a correct explanation of the Assertion.
- (c) If the Assertion is correct but Reason is incorrect.
- (d) If both the Assertion and Reason are incorrect.

Q.1. Assertion : Levigation is used for the separation of oxide ores from impurities.
Reason : Ore particles are removed by washing in a current of water.

Q.2. Assertion : Zinc can be used while copper cannot be used in the recovery of Ag from the complex $[\text{Ag}(\text{CN})_2]^-$
Reason : Zinc is a powerful reducing agent than copper.

Q.3. Assertion : Leaching is a process of reduction.
Reason : Leaching involves treatment of the ore with a suitable reagent so as to make it soluble while impurities remains insoluble.

Q.4. Assertion : Coke and flux are used in smelting.
Reason : The phenomenon in which ore is mixed with suitable flux and coke is heated to fusion is known as smelting.

Q.5. Assertion : Copper obtained after bessemerization is known as blister copper.

Reason : Blisters are produced on the surface of the metal due to escaping of dissolved SO_2 .

Q.6. Assertion : Lead, tin and bismuth are purified by liquation method.

Reason : Lead, tin and bismuth have low m.p. as compared to impurities.

-X-X-X-

ANSWER KEY

Q.1 : (c) Assertion is true but reason is false.

Oxide ores being heavier than the earthy or rocky gangue particles, settle down while lighter impurities are washed away.

Q.2 : (a)

Q.3 : (d) Assertion is false but reason is true. Leaching is a process of concentration.

Q.4 : (b) Both assertion and reason are true but reason is not the correct explanation of assertion. Non fusible mass present in ore in mixing with suitable flux are fused which are then reduced by coke to give free metal.

Q.5 : (a) Both assertion and reason are correct and reason is the correct explanation of assertion.

Q.6 : (a)