

Terms Involved.

Metallurgy: Subject which deals with science and technology applied for the extraction of metals economically on a large scale from their respective ores.

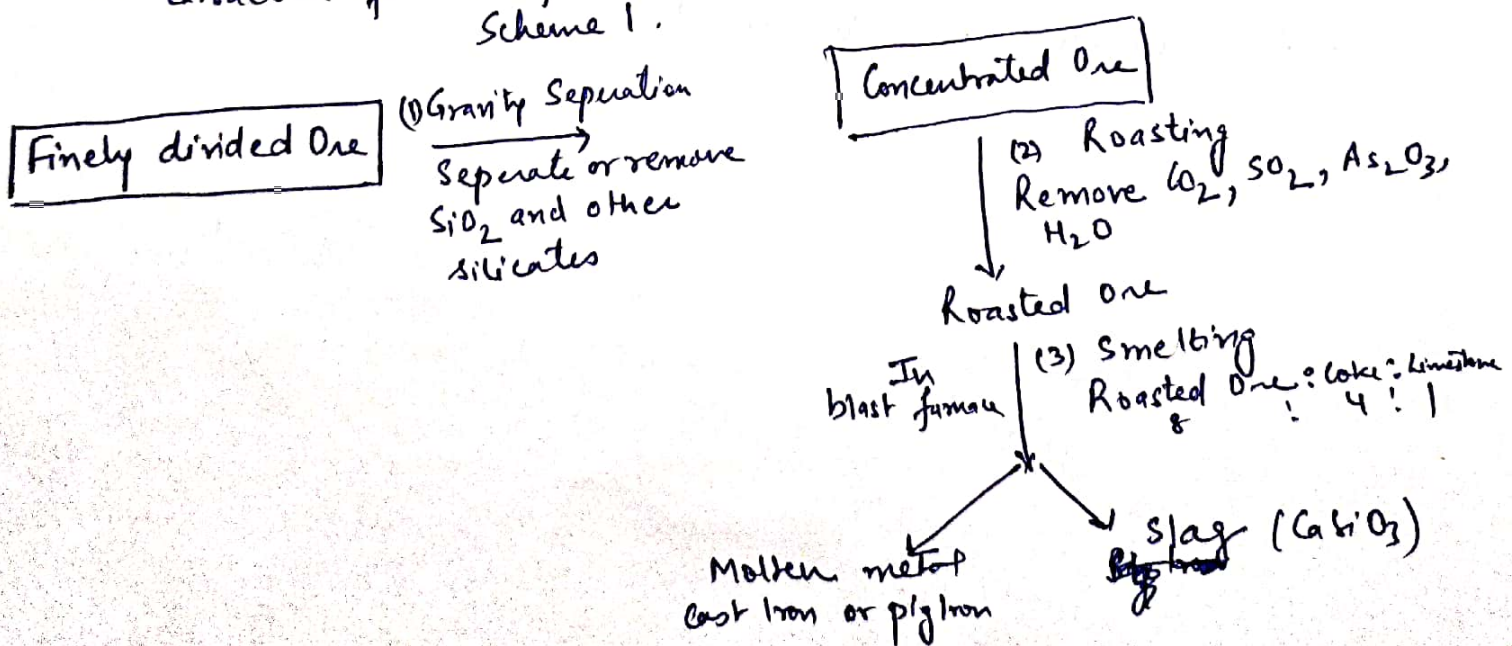
Minerals: The compounds of a metal which are naturally available in the earth's crust and can be obtained by mining are called minerals.

Ore: The minerals from which a metal can be extracted economically and conveniently are called ores.

Extraction of Iron:
Various ore of Iron.

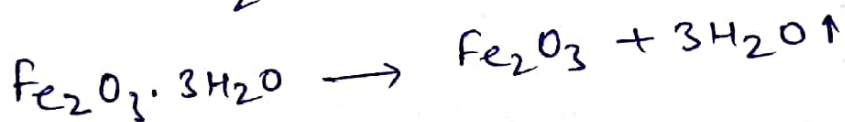
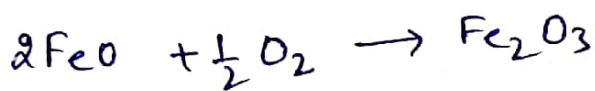
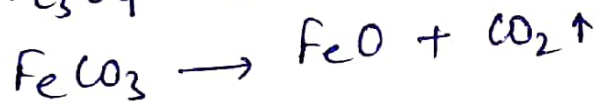
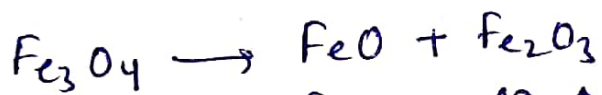
- Haematite Ore Fe_2O_3
- Magnetite Ore Fe_3O_4
- Extraction of Iron from Haematite Ore.

Scheme 1.



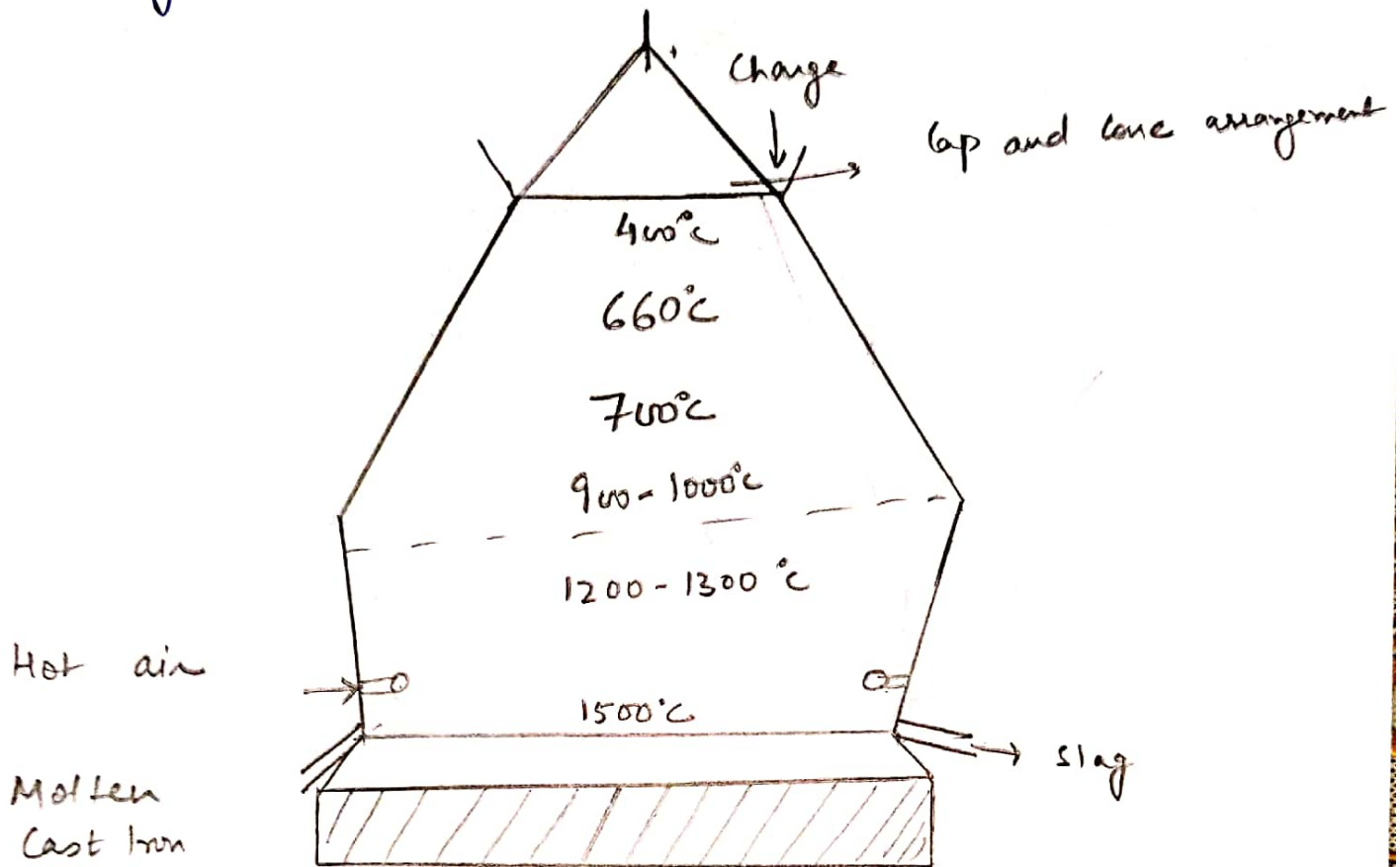
(1) Gravity Separation: The technique is based on the principle of difference in density between ore and impurity to concentrate the ore. The crushed ore is washed by a current of water on a sloping table fitted with a series of corrugated boards known as Wilfley table. The table is allowed to vibrate continuously so that the lighter particles will move downwards and the heavier particles will remain on barriers.

(2) Roasting: Reactions involved in case of iron, Heating of ore in presence of oxygen is roasting.



So the roasted ore contains Fe_2O_3 .

(3) Smelting: It is done in blast furnace.



Reaction involved in smelting.

