EXTRACTION OF METALS: TITANIUM

1. a) Titanium can be extracted from its ore rutile, TiO_2, in a two stage process involving magnesium in one of the stages. Write the equations for the two stages.

    b) Give the approximate temperature for each of the two stages.

    c) Briefly, how is the titanium separated from the reaction mixture.

    d) Explain why titanium isn't extracted by reduction of the ore with coke.

    e) The second stage involves doing the reaction in the inert gas, argon. Why is it important not to have air present?

    f) The reduction is done using a batch process. Explain the difference between a batch process and a continuous flow process.