Quiz 3: Continental Drift (Ch. 3)

1. When plates are restored to former positions, they sometimes appear to overlap. Of course this may be due to error in the reconstruction, but there are valid geological reasons why this might occur. Give an example.

iceland - new rock since europe-greenland rift, so the surface area doesn't line up. niger delta - new land since gondwana rift. Other examples of rock added to coastlines which are younger than the rifting that established that coastline are acceptable

2. Which two common iron minerals carry magnetic fields in sedimentary rocks? Indicate whether each is detrital or secondary.

magnetite: detrital; hematite: secondary - those are the main ones. Other magnetic and paramagnetic minerals are fine as long as provenance is correctly described.

3. Sedimentary basins which are dissected by continental rifting may be useful markers by which to match up previously assembled continents. Give three examples of distinctive sedimentary deposits used for this purpose.

carbonates, reefs, evaporites, phosphorites, bauxite, laterite, dune fields, coal, redbeds, glacial deposits - etc. Anything that represents a discrete microclimate belt or basin will work ok.

4. The apparent polar wander curve measured in India diverges from other southern continents in rocks younger than Cretaceous. Today, there is very little relative motion between India and Australia. What can you say about the APW of these two continents?

it should be parallel but offset from one another by the amount of spreading which already took place during Gondwana breakup.