Related Problems

Answer the following short answer questions

I) Name an element that is invariably bivalent and whose oxide is soluble in excess of NaOH and its dipositive ion has a noble gas core.
Answer:
The element is beryllium (Be) which forms a divalent ion and has a noble gas core [He] $2s^2$
$Be^{2+} = 1\ s^2$
$BeO + 2NaOH \rightarrow Na_2BeO_2 + H_2O$

II) Beryllium oxide has a high melting point. Why?
Answer:
Due to its polymeric nature.

III) Mention the chief reasons for the resemblance between beryllium and aluminium.
Answer:
Both Be^{2+} and Al^{3+} ions have high polarising power.