

## Quiz (Preparation of Salt)

Describe briefly, with suitable chemical equation(s), to show how you would prepare each of the following salts:

(a) Calcium carbonate  $\longrightarrow$  Calcium chloride

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(b) Magnesium  $\longrightarrow$  Magnesium nitrate

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(c) Lead(II) nitrate  $\longrightarrow$  Lead(II) chloride

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(d) Potassium hydroxide  $\longrightarrow$  Potassium sulphate

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(e) Barium carbonate  $\longrightarrow$  Barium sulphate

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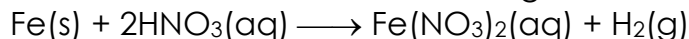
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## Suggested Answer

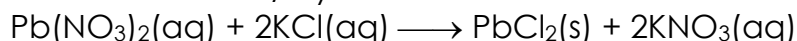
(a) Action of dilute hydrochloric acid on excess calcium carbonate.



(b) Action of dilute nitric acid on magnesium.



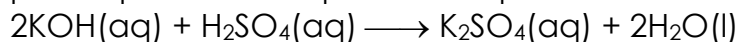
(c) Action of lead(II) nitrate solution on potassium chloride solution / sodium chloride solution / hydrochloric acid.



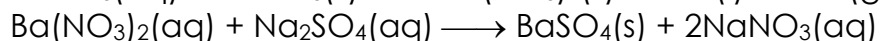
OR  $\text{Pb}(\text{NO}_3)_2(\text{aq}) + 2\text{NaCl}(\text{aq}) \longrightarrow \text{PbCl}_2(\text{s}) + 2\text{NaNO}_3(\text{aq})$

OR  $\text{Pb}(\text{NO}_3)_2(\text{aq}) + 2\text{HCl}(\text{aq}) \longrightarrow \text{PbCl}_2(\text{s}) + 2\text{HNO}_3(\text{aq})$

(d) Titration between potassium hydroxide solution and dilute sulphuric acid with phenolphthalein. Repeat the experiment with the recorded amount of solutions.



(e) Action of dilute nitric acid / hydrochloric acid on barium carbonate to obtain barium nitrate / chloride solution; then action of sodium / potassium sulphate solution on barium nitrate / chloride solution to obtain barium sulphate.



OR  $2\text{HCl}(\text{aq}) + \text{BaCO}_3(\text{s}) \longrightarrow \text{BaCl}_2(\text{s}) + \text{H}_2\text{O}(\text{l}) + \text{CO}_2(\text{g})$

