

| Q. | Answer | Mark | Additional Guidance |
|--------|---|------|-----------------------------------|
| (c) | <p>use an electric heating mantle to heat the distillation flask</p> <p>no naked flame, therefore less risk of ethanol air mixture igniting if there is a leak</p> <p>or</p> <p>use a heated water bath</p> <p>naked flame used to heat water bath further away</p> | 2 | |
| (d) | <p>add some of the distillate to anhydrous copper sulphate</p> <p>which will change colour from white to blue</p> <p>or</p> <p>cobalt chloride paper</p> <p>which will change colour from blue to pink</p> | 2 | |
| 4. (a) | calcium oxide + carbon dioxide | 2 | |
| (b) | <p>heat is given off</p> <p>or</p> <p>a new substance is formed (because it takes up more room)</p> <p>therefore a chemical reaction has taken place</p> | 2 | maximum of 2 marks for two points |
| (c) | <p>lime is alkaline</p> <p>it neutralises acidity in the soil</p> <p>and thus improves soil fertility</p> | 3 | |
| (d) | as a building material | 1 | |