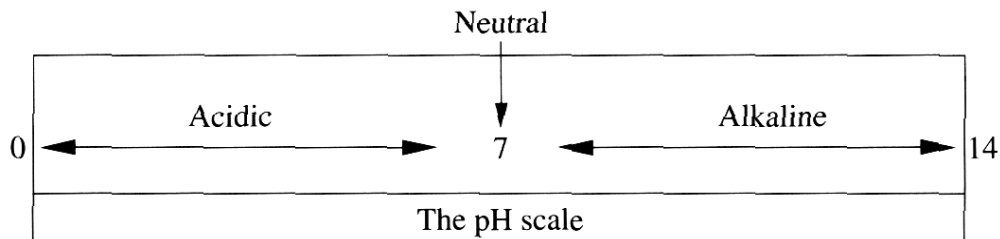


Marks

Question 26 (5 marks)

The following is an extract from a gardening website.

5



Hydrangeas are amazingly versatile in that you can alter the flower colour by changing the pH of the soil. In acid soils, hydrangeas produce blue flowers. In alkaline soils, hydrangeas produce mauve, pink and red flowers.

Describe a first-hand investigation that could be used to verify the effects of pH on the colour of hydrangea flowers.

A first-hand investigation to verify the effects of pH on the colour of hydrangea flowers.

Set up the experiment using a large number of plants, about 50. Make sure plants are identical in size, structure, soil, colour. Have 2 plants as a control in experiment that ~~is~~^{are} not changed at all.

Set up plants

- change pH of 16 plants soil to be alkaline
- change pH of 16 plants soil to be Neutral
- change pH of 16 plants soil to be acidic

Keep all plants in identical environments eg sunlight.

Then monitor plants and record colours of flowers and pH of soil