

## Question 24 (4 marks)

Assess the impact of atomic absorption spectroscopy (AAS) on the scientific understanding of the effects of trace elements. 4

Before Atomic Absorption Spectrophotometry was invented, the extent of scientific research into trace elements was very limited. Machines & methods could not detect elements in <sup>small</sup> concentrations,  $\therefore$  they went unnoticed. This proves to be harmful, as contaminated foods, heavy metals in soils, contaminants in drinking water & streams & lakes, could not be detected. This was a health issue until AAS was introduced. The ability to measure concentrations in parts per million, by the measurement of absorbed wavelengths by different elements, allowed streams & dam to be monitored to detect eutrophication, farmers to monitor their soil to ~~maximise~~ <sup>maximise</sup> production & minimise contaminants, it allowed nurseries to keep plants growing healthily, & also further research into different metals. The impact on society was great, highlighting the detrimental effects & crucial elements needed for various human activities & healthy human life.