2

2

## Question 31 (6 marks)

A student collected a 250 mL sample of water from a local dam for analysis. (a) The data collected are shown in the table.

7 g \$ 0.24g
3 g
57 g \$ 1.14 g

(i) The water was filtered and the filtrate evaporated to dryness.

Calculate the percentage of the total dissolved solids in the dam sample. disselved solids would pass through filler paper. TDS = 1-14 g = 4-56g 6'. 0-7502 10 7- TDS = 0-456 

(ii) It is suspected that the water in the dam has a high concentration of chloride ions.

Describe a chemical test that could be carried out on the water sample to determine the presence of chloride ions. Include an equation in your answer.

AgNO3 + CI -> AgClos, + NO3 net: Agt + Clogs -> Aglless Agll is inspluble and would thus indicate prime of Cl. CO2 also forms a precipitate with As therefore add HNOz to the solution to confirm. If the precipitale

**Question 31 continues on page 24** 

dissolves, then it is  $(O_3^{2-}, but if it remains the CI preserve -23-$ is califormed.

## **Question 31**

2010 HSC Chemistry

网络贝尔德斯贝特纳伦德尔德斯尔 医外侧外外的 化合物化合物 化合物化合物

2

## Question 31 (continued)

Name an ion other than chloride that commonly pollutes waterways, and identify (b) its source and the effect of its presence on water quality. the start of the start of the

Coldin tas (Ca2) are often fand to water ways dissolving of mastere (laco,) 2+ presence of 0 Courses sours from lather

## End of Question 31

cannon pollutent in water ways is SOy". This is sourced from furnerun-offs as fertilesers centains SOG<sup>2</sup>. This reacts with well to Beforn sulphure acid which can reduce the pH of water wors taking it copies killing aquete life and vaderer naking it badde. difficult to treat ,

© Board of Studies NSW 2010

Control of an attack to be defined the

A Second State Academy and the second straining of the

and a filler as a solution to some the

and Same Mar Hickory and

where we are also and send that have to be the set of the second of the second of the second of the second of the