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Centre Number

Section I – Part B (continued)

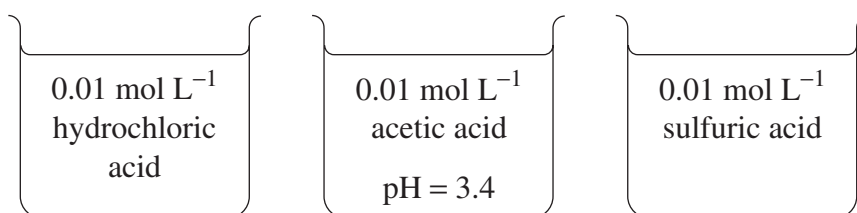
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Student Number

Marks

Question 22 (5 marks)

Solutions of hydrochloric acid, acetic acid and sulfuric acid were prepared. Each of the solutions had the same concentration (0.01 mol L^{-1}). The pH of the acetic acid solution was 3.4.



- (a) Calculate the pH of the hydrochloric acid solution. 1

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- (b) Compare the pH of the sulfuric acid solution to the pH of the hydrochloric acid solution. Justify your answer. (No calculations are necessary.) 2

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- (c) Explain why the acetic acid solution has a higher pH than the hydrochloric acid solution. 2

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