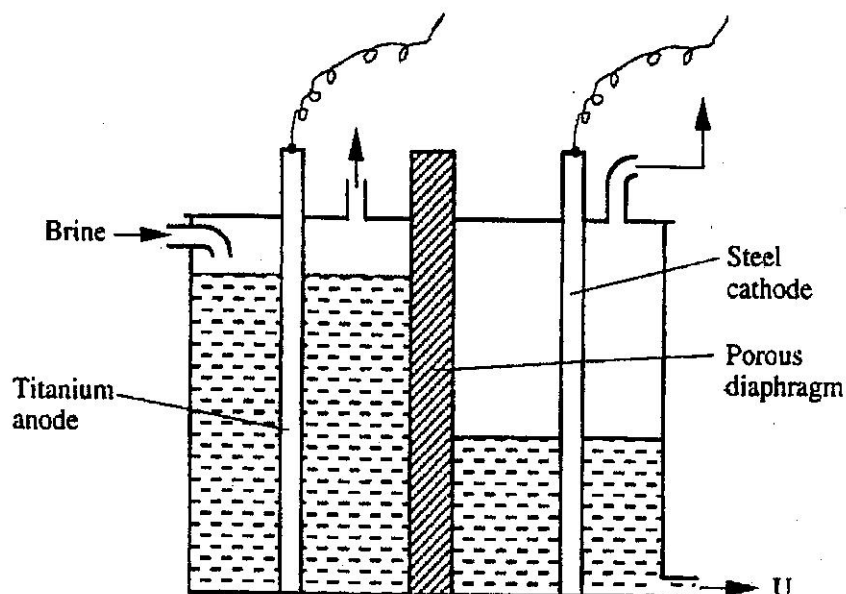


- ii) Solubility 25g/100g water
 iii) Mass dissolved = 62g
 Mass undissolved = 80 – 62 = 18g
- c) R.F.M. of KNO_3 = 101
- $$\text{Moles of } \text{KNO}_3 \text{ in 100g of water} = \frac{25}{101} = 0.2475$$
- $$\text{Moles of } \text{KNO}_3 \text{ in 1000g of water} = \frac{0.2475 \times 1000}{100} = 2.475 \text{ M.}$$

Question 7

- (a) Brine usually contains soluble calcium and magnesium salts. Explain how sodium carbonate is used to purify brine. (2 marks)
- (b) The diagram below represents a diaphragm cell used to electrolyse pure brine.



- (i) Write the equations for the reactions that take at:
- I cathode (1 mark)
- II anode (1 mark)
- (ii) Name:
- I product at U (1 mark)
- II another material that can be used instead of Titanium (1 mark)