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**CHEMISTRY**

CONCEPTUAL QUESTIONS

1. Calculate the molarity of each of the following solution; 30mL of 0.5 M sulphuric acid diluted to 500mL.

2. Calculate the molality of KI if the density of 20% aqueous KI is 1.202 g/mL.

3. A sample of drinking water was found to be severely contaminated with chloroform supposed to be a carcinogenic. The level of contamination was 15 ppm :

I) express this in percent by mass

II) determine the molality of chloroform in the water sample

4. Why oxygen is mixed with helium is used by deep sea divers?

5. At the same temperature, hydrogen is more soluble in water than helium. Which of them will have a higher value of KH and why?

6. How is solubility of gases in water related with their Henry’s law constant at the same pressure and temperature?

7. V1 cc of solution having molarity M1 is diluted to have molarity M2. Derive expression for volume of water required to be added.

8. Why is liquid ammonia bottle first cooled in ice before opening it?