

2014/01/01  
 2014/01/01

1. (a) Both A and R are true and the R is the correct explanation of A.
2. (b) Both A and R are true but R is not the correct explanation for A.
3. (c) A is true but R is false.

✳

$$1. \text{ Mass of solution} = (50 + 2.5) \text{ g} \\ = 52.5 \text{ g}$$

$$\text{Concentration of solution} = \frac{\text{Mass of solute} \times 100}{\text{Mass of solution}} \\ = \frac{2.5 \text{ g} \times 100}{52.5 \text{ g}} \\ = \cancel{4.76\%} \quad 4.7\%$$

$$2. \text{ Mass of solution} = 120 \text{ g}$$

$$\text{Mass of ~~urea~~ solute (urea)} = 16 \text{ g}$$

$$\text{Concentration of solution} = \frac{16 \cancel{g} \times 100}{120 \cancel{g}} \\ = \frac{16}{12} \times 100 \\ = 1.4\%$$

3. Mass of solution = 150 ml.

Mass of solute = 25 ml.

$$\text{Concentration of solution} = \frac{25}{150} \times 100$$

$$= 166.7\%$$

4. The sugar starts to dissolve in the solvent, when the temperature is increased.

5. Colloid.

6. Carbon Tetrachloride can be used to separate a mixture of Sulphur and Carbon.

7. Sublimation can be used to separate a mixture of anthracene and copper Sulphate.