

Model Question Paper**Solutions (C) -Part I**

10th Standard

ScienceReg.No. :

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I. Answer all the questions.

II. Use Blue pen only.

III. Question No 19 is compulsory.

Time : 01:00:00 Hrs

Total Marks : 30

10 x 1 = 10

Section-A

- 1) A solution that contains water as the solvent is called an aqueous solution. If carbon disulphide is a solvent in a given solution, then the solution is called _____.
(a) aqueous solution (b) non- aqueous solution
- 2) If two liquids are mutually soluble, they are called _____ liquids.
(a) miscible (b) immiscible
- 3) When sunlight passes through the window of a classroom, its path is visible. This is due to _____ of light.
(a) reflection (b) scattering
- 4) The particles in various forms are visible only under an ultramicroscope. A solution containing such particles is called _____.
(a) true solution (b) colloidal solution
- 5) The number of components in a binary solution are/is _____.
(a) one (b) two
- 6) The mixture of gases used by deep-sea divers is _____.
(a) helium-oxygen (b) oxygen-nitrogen
- 7) Soil cannot store more nitrogen than it can hold. Hence soil is said to be in a state of _____.
(a) saturation (b) unsaturation
- 8) In an endothermic process, solubility increases with _____ in temperature.
(a) increase (b) decrease
- 9) Aquatic species are more comfortable in cold water because _____.
(a) as the temperature decreases, the solubility of dissolved oxygen increases. (b) as the temperature increases, the solubility of dissolved oxygen increases.
(c) as the temperature increases, the solubility of dissolved oxygen decreases
- 10) _____ is opaque in nature.
(a) Water (b) True solution (c) Colloids (d) Suspensions

Section-B

10 x 2 = 20

- 11) From the table given below, furnish your points of inference.

Substance solubility at 25 °C	
NaCl	36g
NaBr	95g
NaI	184g

- 12) Distinguish between the saturated and unsaturated solution at a temperature of 25° C using the data given below (Note : Solubility of NaCl is 36g) i) 16g NaCl in 100g water
ii) 36g NaCl in 100g water
- 13) Differentiate true solution and colloidal solution.
- 14) You have prepared a saturated solution of sugar at room temperature. Is it possible to dissolve some more grams of sugar to this solution? Justify your answer.
- 15) Find the concentration of solution in terms of weight percent if 20gm of common salt is dissolved in 50gm of water.
- 16) Valli took some common salt, naphthalene balls, camphor, baking soda and washing soda. She attempted to dissolve these substances either in water or in acetone.

Complete the table with the expected results.

SUBSTANCE	MEDIUM IN WHICH IT IS SOLUBLE	REASON
a. Common salt		
b. Naphthalene balls		
c. Camphor		
d. Baking soda		
e. Washing soda		

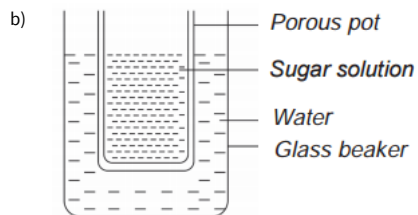
17)



- i) Which gas is dissolved in soft drinks? ii) What will you do to increase the solubility of this gas?
- 18) Beaker A has sugar mixed with water and Beaker B has vitamin C dissolved in water. i) Which solution will scatter light? ii) In which beaker does the Brownian movement take place? iii) Name the type of solution that beaker A and beaker B contain. iv) Which of the two solutions is homogeneous? v) Identify the beaker that has particles of size 10 \AA^0 to 2000 \AA^0 .

- 19) a) Name the type of solution formed in the following cases: i) 20g of NaCl in 100g of water. ii) 36g of NaCl in 100g of water. iii) 45g of NaCl in 100g of water at 80°C. iv) Sulphur dissolved in CS₂. v) Nitrogen in soil.

(OR)



In the above case, Sekar observed that the water turned sweeter after sometime. Explain the reason for the same.

