

## CBSE TEST PAPER 06

### CLASS XI CHEMISTRY (Organic Chemistry Some Basic Principle and Techniques)

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#### General Instruction:

- All questions are compulsory.
  - Marks are given alongwith their questions.
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1. Name the common techniques used for purification of organic compounds. [2]
2. Will  $CCl_4$  give white precipitate of Ag Cl on heating it with  $AgNO_3$  ? [2]
3. How can the mixture of kerosene oil and water be separated? [1]
4. Which technique can be used for purification of iodine that contains traces of NaCl? [1]
5. Without using column chromatography, how will you separate a mixture of camphor and benzoic acid? [2]
6. A liquid (1.0g) has three components. Which technique will you employ to separate them? [2]
7. Lasaigne's test is not shown by diazonium salts. Why? [1]
8. Name two methods which can be safely used to purify aniline. [2]
9. What is the basic principle of chromatography? [2]
10. How will you separate a mixture of two organic compounds which have different solubility's in the same solvent? [2]

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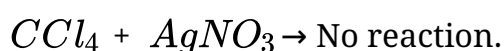
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Ans 1. common techniques used for purification of organic compounds are (i) Sublimation (ii) Crystallization (iii) Distillation (iv) Differential extraction and (v) Chromatography.

Ans 2.  $CCl_4$  will not give white precipitate of  $AgCl$  on heating it with silver nitrate ( $AgNO_3$ ) because,  $CCl_4$  is a covalent compound and does not ionize to give chloride ions.

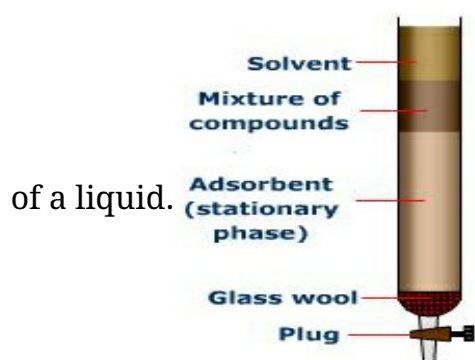


Ans 3. kerosene and water are immiscible liquids. The mixture of kerosene oil and water can be separated by using a separating funnel. This process is called as decantation.

Ans 4. The mixture of iodine and sodium chloride can be separated by sublimation method because non-volatile sodium chloride does not sublime.

Ans 5. Sublimation can not be used since both camphor and benzoic acid sublime on heating. Therefore a chemical method using  $NaHCO_3$  solution is used when benzoic acid dissolves leaving camphor behind. The filtrate is cooled and then acidified with dil  $HCl$ , to get benzoic acid.

Ans 6. Column chromatography is the best technique used to separate the three components



Ans 7. Diazonium salts usually leave  $N_2$  on heating much before they have a chance to react with the fused sodium metal. when nitrogen is lost then  $NaCN$  will not be formed. Therefore, diazonium salts do not show positive Lassaigne's test for nitrogen.

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Ans 8. aniline can be purified by following two methods :

(i) vacuum distillation method

(ii) steam distillation method.

Ans 9. The method of chromatography is based on the difference in the rates at which the components of a mixture are adsorbed on a suitable adsorbent.

Ans 10. fractional distillation is the process of separating the different organic compounds with difference in their solubilities in the same solvent. for example , Petroleum distillation is done in the fractionating column into various components over a wide range of temperatures.