

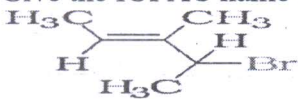
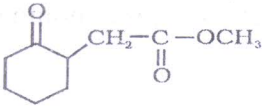
**KENDRIYA VIDYALAYA SANGATHAN
ERNAKULAM REGION
PRE BOARD EXAMINATION
CHEMISTRY (043)
CLASS-XII – (2012-13)**

Time Allowed: 3 Hrs

Maximum Marks: 70

General Instructions:

- All questions are compulsory.
- Question No. 1-8 are very short answer questions and carry 1 mark each.
- Question No. 9-18 are short answer questions and carry 2 marks each.
- Question No. 19-27 are also short answer questions and carry 3 marks each.
- Question No. 28-30 are long answer questions and carry 5 marks each.
- Use log tables if necessary, use of calculators is not allowed.

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|-----|--|---|
| 1. | Why does urea has a sharp melting point , but glass does not ? | 1 |
| 2. | How a semipermeable membrane can be made for desalination of sea water by reverse osmosis. | 1 |
| 3. | What is a flux ? | 1 |
| 4. | Out of SO ₂ and CH ₄ , which is adsorbed on activated charcoal to a greater extent and why ? | 1 |
| 5. | Which among the following has lower boiling point and why? PH ₃ or NH ₃ | 1 |
| 6. | What happens when sodium azide is heated ? | 1 |
| 7. | Give the IUPAC name for the following  | 1 |
| 8. | Give the structure of 3- Oxopentanal | 1 |
| 9. | Give reasons for the following a. Ethylene glycol is added to water in car radiator while driving in hill stations. b. Osmotic pressure measurements is preferred for molar mass determination of macromolecules. | 2 |
| 10. | State Raoult's law for solutions of volatile liquids. Taking suitable examples explain the meaning of positive and negative deviations from Raoult's law. OR State Henry's law and mention any two important application | 2 |
| 11. | The initial concentration of N ₂ O ₅ in the following first order reaction N ₂ O ₅ (g) ⇌ 2NO ₂ (g) + 1/2O ₂ (g), was 1.24X10 ⁻² molL ⁻¹ at 318 K. The concentration of N ₂ O ₅ after 60 minutes was 0.20 x 10 ⁻² molL ⁻¹ . Calculate the rate constant of the reaction at 318K. | 2 |
| 12. | Although thermodynamically feasible , in practice , magnesium metal is not used for the reduction of alumina in the metallurgy of aluminium. Why ? | 2 |
| 13. | Write the structures of the products of the following reactions. (i) CH ₃ - CH = CH ₂ $\xrightarrow{H_2O/H^+}$ (ii)  $\xrightarrow{NaBH_4}$ | 2 |

