

Model Question paper
Colligative Properties 2

11th Standard

Chemistry

Reg.No. :

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I. Answer all the questions.

II. Use blue pen only.

Time : 00:45:00 Hrs

Total Marks : 30

Part - A

2 x 1 = 2

- 1) In cold countries, ethylene glycol is added to water in the radiators of cars during winters. In results in:
(a) Lowering boiling point (b) Reducing viscosity (c) Reducing specific heat (d) Lowering freezing point
- 2) The Van't Hoff factor of 0.005 M aqueous solution of KCL is 1.95. The degree of ionisation of KCL is
(a) 0.94 (b) 0.95 (c) 0.96 (d) 0.59

Part - B

2 x 2 = 4

- 3) What do you understand by molal elevation of boiling point? What are abnormal solutes?
- 4) Addition of non-volatile solute always increases the boiling point of the solution. Why?

Part - C

3 x 3 = 9

- 5) What are isotonic solutions?
- 6) What are the advantages of Berkley-Hartly method?
- 7) Explain how the degree of dissociation of an electrolyte may be determined from the measurement of a colligative property?

Part - D

3 x 5 = 15

- 8) What is elevation of boiling point? Explain its determination by Cottrell's method.
- 9) Explain the laws of osmotic pressure? Explain its determination by Berkley-Hartley method?
- 10) What are abnormal colligative properties? Explain with example and write its determination using Van't Hoff factor.

