

Seat  
No.

B.Sc. (Part - III) (Semester - VI) (CBCS)  
Examination, January - 2023  
CHEMISTRY (Paper - XV)  
Physical Chemistry  
Sub. Code : 81676/81878

Day and Date : Thursday, 05 - 01 - 2023  
Time : 10.30 a.m. to 12.30 p.m.

Total Marks : 40

- Instructions :
- 1) All questions are compulsory.
  - 2) Draw neat diagrams wherever necessary.
  - 3) Figures to right indicate full marks.
  - 4) Use of scientific calculator and logarithmic table to allowed.

Q1) A) Answer in one sentence [4]

- i) Mention any one application of Clapeyron - Clausius equation.
- ii) Define Unit cell.
- iii) Give one example of first order counter reaction.
- iv) Give any two pairs of miscible liquids.

B) Choose the most correct alternative for each of the following. [4]

- i. The Distribution Coefficient  $K = C_1 / \sqrt{C_2}$  indicates that the solute molecule \_\_\_\_\_.
  - a) Associated in second solvent.
  - b) Dissociated in first solvent.
  - c) Insoluble in first solvent.
  - d) Insoluble in second solvent.
- ii) In case of salt-water system, the temperature at which ice, solid KI and solution are in equilibrium known as \_\_\_\_\_.
  - a) Boyle temperature
  - b) Cryohydric temperature
  - c) Transition temperature
  - d) Absolute temperature

P.T.O.

