

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN  
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)  
Chromepet, Chennai — 600 044.

B.Sc. END SEMESTER EXAMINATIONS APRIL-2022

SEMESTER - VI

17UCHCT6015 & UCH/CT/6015 - Physical Chemistry II

Total Duration : 3 Hrs.

Total Marks : 60

**Section A**

Answer any **SIX** questions ( $6 \times 5 = 30$  Marks)

1. Define Kohlrausch's law.
2. Enumerate the significance of buffer in human system.
3. Define electromotive force.
4. What are the significance of glass electrode?
5. Distinguish between conductivity and molar conductivity
6. What is a point group?
7. Why distilled water should be used in conductivity experiments?
8. What is electrochemical series?

**Section B**

Answer any **THREE** questions ( $3 \times 10 = 30$  Marks)

9. How does molar conductance vary with dilution for strong electrolytes and for a weak electrolytes.
10. Sketch and explain the shapes of the conductometric titration curve for addition of strong acid to strong base and addition weak acid to a strong base .
11. Derive an expression for the Nernst equation.
12. How is the pH of a solution determined potentiometrically?
13. Explain in detail about the axis of symmetry and plane of symmetry in symmetry elements.

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