

❖ Problems

- Q 1. Discuss the Debye-Huckel theory of ion-ion interaction in detail.
- Q 2. What is excess charge density? How does it vary with the distance from the central ion?
- Q 3. Define Debye-Huckel reciprocal length.
- Q 4. Derive the expression for the contribution of the ionic cloud to the total potential at a particular distance from the reference ion in strong electrolytes.
- Q 5. State and explain the Debye-Huckel limiting law of activity coefficient. Also, discuss its limitations.
- Q 6. What is the ion-size parameter? How does it affect total potential around the central ion?
- Q 7. Discuss the asymmetry effect in the conductance of strong electrolytes?
- Q 8. Derive and discuss the Debye-Huckel-Onsager equation for aqueous solutions.
- Q 9. Discuss the effect of the nature of the solvent on the ionic mobility at infinite dilution.
- Q 10. How does the equivalent conductivity vary with the square root of the concentration if the dielectric constant of the solvent is very low?
- Q 11. Define ion-association in strong electrolytic solutions. How does this affect overall conductivity?

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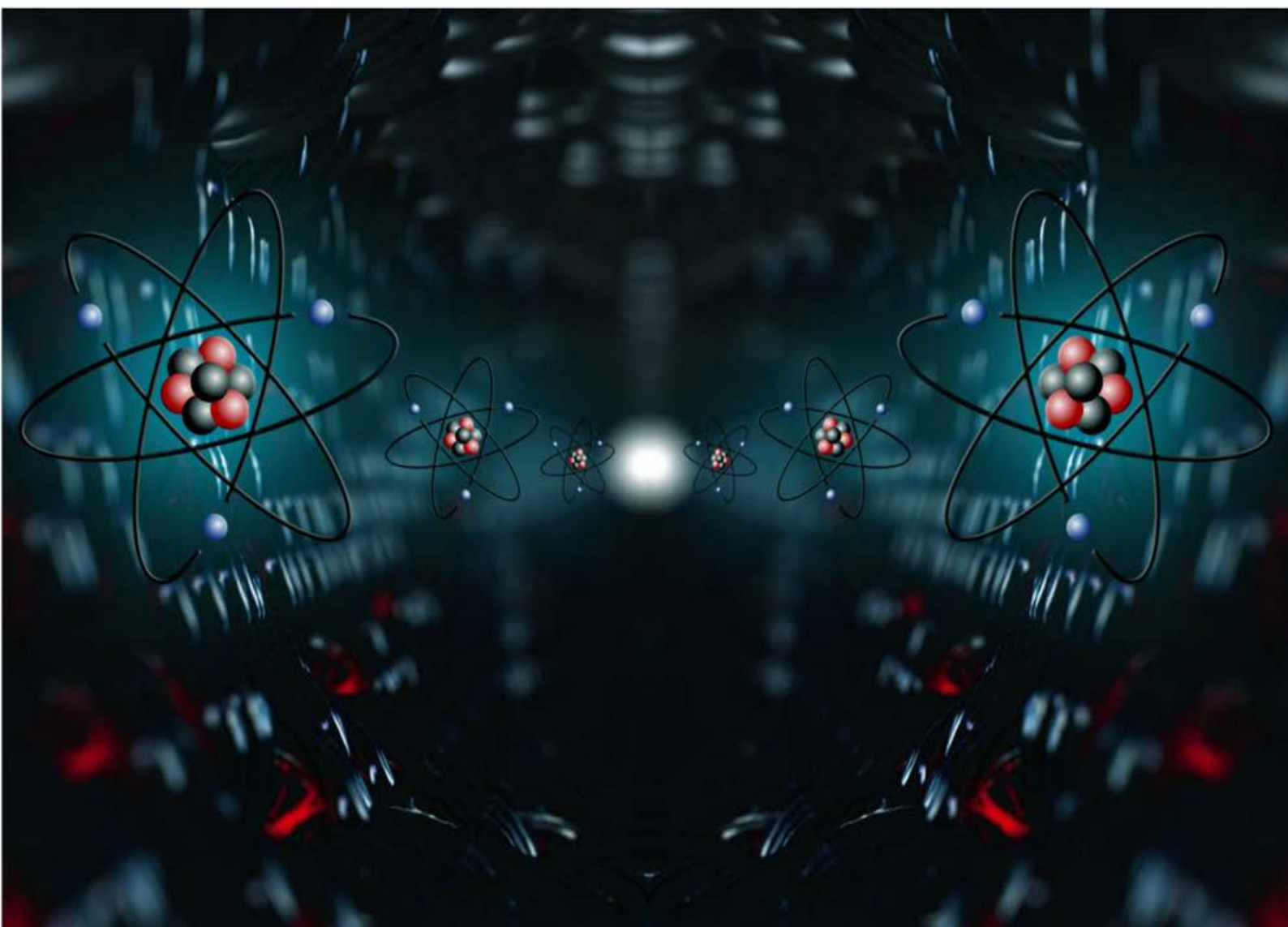
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Volume I

MANDEEP DALAL



First Edition

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