

❖ Problems

- Q 1. Derive and discuss the Clausius-Clapeyron equation.
- Q 2. What is the law of mass actions? How is it different from actual rate law?
- Q 3. Derive the law of mass action in the thermodynamic framework.
- Q 4. State and discuss the Nernst heat theorem.
- Q 5. What is the third law of thermodynamics? How it can be used to obtain the absolute entropies?
- Q 6. What do you mean by reduced phase rule? Discuss the same for two-component systems.
- Q 7. Draw and discuss the phase diagram of eutectic systems with reference to the cooling curve method.
- Q 8. Define congruent and incongruent melting points.
- Q 9. Draw and discuss the phase diagram of lead-silver system.
- Q 10. Draw and discuss the phase diagram of NaCl-H₂O system.
- Q 11. What are solid solutions? Discuss the thermodynamic treatment for the same with special reference to ascending-type solid solutions.

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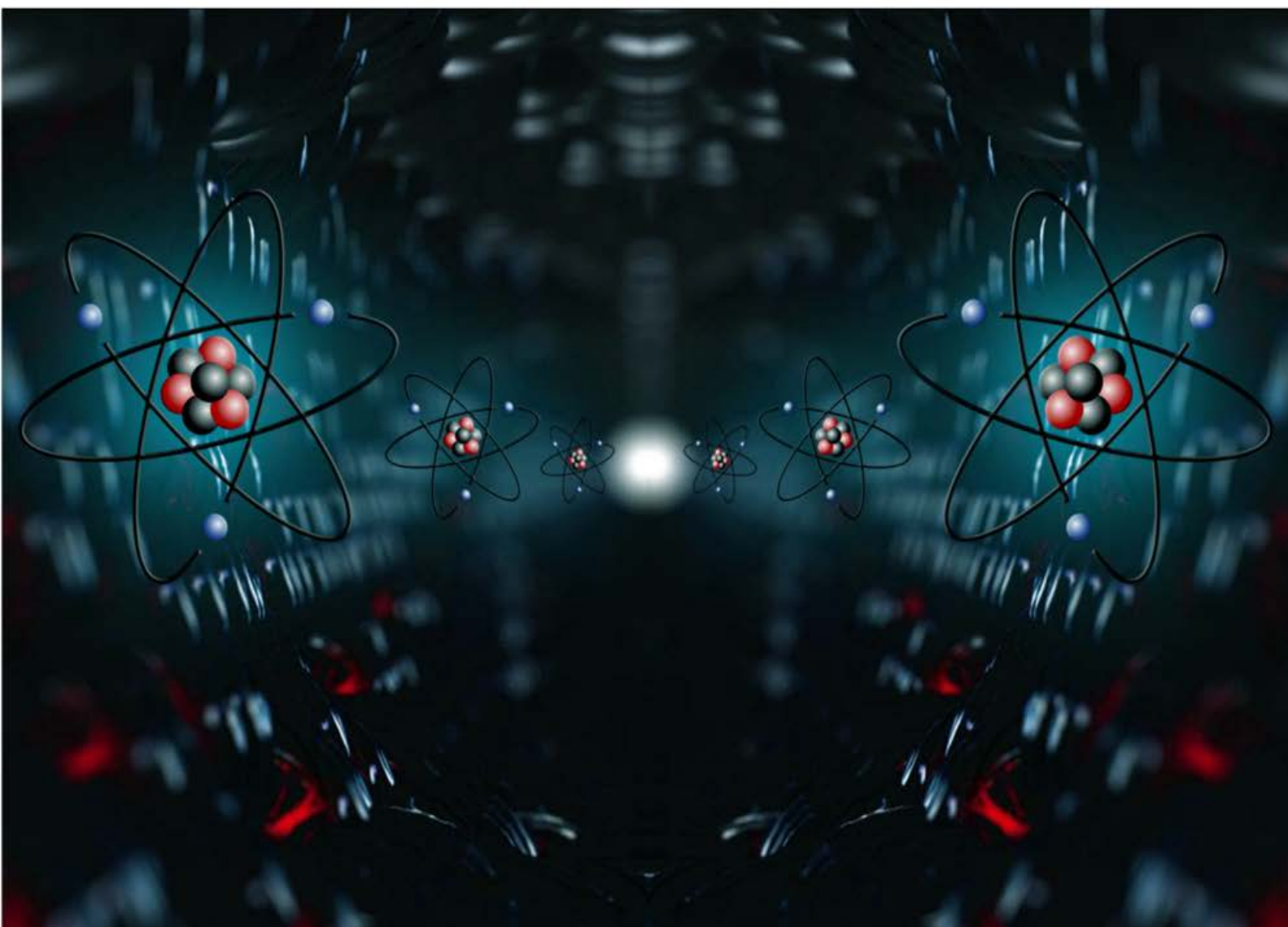
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Volume I

MANDEEP DALAL



First Edition

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