

- b) Discuss j-j coupling theory of spectra. 05
c) Write short note on microcanonical ensemble. 05
- Q-6** **Attempt all questions** **(14)**
a) Describe briefly L-S coupling theory of molecular spectra. 07
b) Discuss in brief Gibbs paradox. 07
- Q-7** **Attempt all questions** **(14)**
a) How can X-ray produce practically? Discuss briefly with neat and clean diagram. 07
b) What is quantum numbers? Discuss briefly with their physical interpretation. 07
- Q-8** **Attempt all questions** **(14)**
a) State Liouville's theorem. 05
b) Write short note on Ether hypothesis. 04
c) Discuss Moseley's law. 05

