



- b) Explain and derive the expression for the bending moment of a beam. (07)
- c) What is the significance of Reynold's number? (02)
- Q-6 Attempt all questions (14)**
- a) Differentiate between LS and jj coupling. (04)
- b) Write a note on Zeeman effect. (07)
- c) How is Stark effect an electric analogue of Zeeman effect? (03)
- Q-7 Attempt all questions (14)**
- a) Explain with suitable diagrams how X-Rays are produced? (08)
- b) Based on X-Ray diffraction from a crystal structure, derive the Bragg's law. (06)
- Q-8 Attempt all questions (14)**
- a) Write a note on absorption and emission spectra. (08)
- b) What is a cantilever? Mention its different types and applications. (06)

