

1. Structure of matter. Models of atom.
2. Radioactivity. Decay law. Half-life, decay constant etc.
3. Neutrons. Cross-sections.
4. Fission. Decay products, energy distribution.
5. Basic reactor concept. Main parts of reactor.
6. Classification of reactors.
7. Nuclear fuel cycle. Stages and processes.
8. Nuclear waste management. Classification of waste. Disposals.
9. Nuclear weapons. Effects of nuclear explosion.