

Course Code: 3MSCP2
Course: Nuclear & Particle Physics
Credit: 3
Last Submission Date: April 30 (for January Session)
October 31, (for July session)

Max. Marks:-30

Min. Marks:-11

Note:-attempt all questions.

- Que.1 Explain scattering matrix in detail.
- Que.2 Describe shell model and use it to explain magic numbers. Point out the success and unsucccess of this model.
- Que.3 What are nuclear forces? Explain the spin dependence of these forces.
- Que.4 Describe Bohr wheeler theory of nuclear fission.
- Que.5 Discuss the detection and properties of neutrino.
- Que.6 What is β - decay? What are the type of β -decay how is it explained by the neutrino and anti neutrino hypothesis.
- Que.7 What is su (2) and su (3) symmetry.
- Que.8 Give the properties of hadrons and leptons.