

SARASWATI MAHILA MAHAVIDHYALAYA, PALWAL

LESSON-PLAN

Class:B.SC 3rd year

Semester: 6th

ODD/EVEN Even

Subject:Nuclear Physics

Session: 2021-

22

Lecture Number	Topic
1	Introduction to nuclear structure and properties of nuclei.
2	Nuclear mass and binding energy
3	Systematic nuclear binding energy,nuclear stability
4	Nuclear size,properties of nucleus
5	Determination of mass by Bain bridge mass spectrograph
6	Jordan double focussing mass spectrograph
7	Rutherford alpha particle scattering experiment
8	Determination of charge e Moseley law
9	Introduction of heavy charged particles,alpha disintegration and it's theory
10	Energy loss of heavy charged particles,range and straggling of charged particles
11	Geiger nuttal law,beta particles,neutrino hypothesis
12	Type of beta decay and energetics of beta decay,energy loss of beta particles
13	Range of electrons, absorption of beta particles
14	Interaction of gamma ray,nature and energetics of gamma rays.
15	Absorption of Amma rays and it's application
16	Test and revision of 2nd unit
17	Introduction of nuclear reactions
18	Conservation laws,q value and reaction threshold

19	Nuclear reactors,general aspects of reactor design.
20	Principle, construction and working of nuclear fission and nuclear fusion.
21	Linear accelerator
22	Tendem accelerator,cyclotron accelerator.
23	Betatron accelerator.
24	Ionization chamber, proportional counter
25	G.m. counter, scintillation counter.
26	Semiconductor detector.
27	Test and revision of 3rd unit.

Signature:

shilpi mangla