SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)
(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.
B.Sc.(Chemistry) END SEMESTER EXAMINATIONS APRIL-2023
SEMESTER - IV
20UCHAT4004 - Allied Physics - II

Total Duration : 2 Hrs 30 Mins.   Total Marks : 60

Section B

Answer any **SIX** questions $(6 \times 5 = 30$ Marks$)$

1. Describe the Air wedge method for determining the diameter of thin wire.

2. Briefly explain the L-S Coupling and j-j Coupling.

3. Obtain an expression for Half-life period.

4. Elucidate the properties of Beta Rays.

5. Describe Linde's process of liquifying of air.

6. Discuss the practical application of low temperature in Refrigeration.

7. Explain Refraction through a thin prism.

8. State prove De Morgan's theorems.

Section C

Answer any **THREE** questions $(3 \times 10 = 30$ Marks$)$

9. Show how two narrow angled prism can be combined to produce,
   (a) Dispersion without deviation.
   (d) Deviation without dispersion.
   Calculate the angle of dispersion and the angle of deviation respectively.

10. Describe the vector Atom model of the atom and explain the different quantum numbers associated in it.

11. Describe the liquid drop model of the nuclear. How can the semi emprical mam formals be derived form it.

12. Explain the theory of porous plug experiment is detail.

13. Show that how a NAND gate NOR gate function as a universal building blocks.

*****