

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.Physics - END SEMESTER EXAMINATIONS - NOV'2024

SEMESTER - VI

20UPHCT6013 - Solid State Physics

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

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

1. Explain the seven crystal systems with examples.
2. Describe the rotating crystal method of x - ray diffraction.
3. Compare para, Dia and ferromagnetic materials.
4. Explain curie Weiss law.
5. Explain Meissner effect.
6. Explain fundamental definitions in Dielectrics.
7. Mention the properties of paramagnetic material.
8. Write a short note on high temperature super conductor. Give an example.

Section C

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

9. Explain the atomic radius, Coordination number, packing factor of bcc and fcc structures.
10. Derive an expression for Bragg's law.
11. Discuss Weiss theory of paramagnetism.
12. Derive Clausius Mosotti relation. Explain the results.
13. Describe the BCS theory of superconductivity.
