

**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. END SEMESTER EXAMINATIONS APRIL-2022**

**SEMESTER - VI**

**17UPHCT6A15 & UPH/CT/6A15 - Solid State Physics and Semiconductor Device**

**Total Duration : 3 Hrs.**

**Total Marks : 60**

**Section A**

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

1. Define "Crystal Structure".
2. What is Bragg's law in one dimension?
3. Define "Miller Indices".
4. What's Neel's temperature?
5. State the different type of polarization.
6. What is the P-N junction?
7. Write important characteristic of FET.
8. Define the reciprocal lattice.

**Section B**

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

9. Briefly describe about fourteen types of Bravais lattice.
10. Describe the rotating crystal method of X-ray diffraction.
11. Explain about the different type of Magnetic materials.
12. Derive the Clausius-Mosotti relation.
13. Explain the UJT relation oscillator with circuit diagram.

**\*\*\*\*\***