

# B.Sc. VI SEM

## Lesson Plan

Name of the Assistant/ Associate Professor: MRS. SANTOSH KURRA  
 Class and Section: B.Sc. III<sup>rd</sup> SEM. A (1-3) (Monday, Tuesday and Wednesday)  
 Subject: Solid State and Nano Physics

Week	Date	Topics
1 UNIT I	1-Jan-18	Crystalline and glassy forms. Liquid crystals
	2-Jan-18	Crystal structure, Periodicity, Lattice basis, translational vectors.
	3-Jan-18	Unit cell and Primitive cell, Wigner Seitz Primitive cell.
	4-Jan-18	
	5-Jan-18	
	6-Jan-18	
	7-Jan-18	Sunday
2	8-Jan-18	Symmetry operations for a two dimensional crystal.
	9-Jan-18	Bravai's lattices in two and three dimensions.
	10-Jan-18	Crystal planes and Miller indices, Interplanar spacing
	11-Jan-18	
	12-Jan-18	
	13-Jan-18	
	14-Jan-18	Sunday
3	15-Jan-18	Crystal structure of ZnS, NaCl.
	16-Jan-18	Crystal structure of Diamond.
	17-Jan-18	Numerical Problems and doubts.
	18-Jan-18	
	19-Jan-18	
	20-Jan-18	
	21-Jan-18	Sunday
4 UNIT II	22-Jan-18	Vasant Panchami
	23-Jan-18	Test of Unit I.
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	
	26-Jan-18	Republic Day
	27-Jan-18	
	28-Jan-18	Sunday
5 II	29-Jan-18	X-ray Diffraction (Bark) + Bragg's Law
	30-Jan-18	Experimental X-ray Diffraction methods.
	31-Jan-18	K-space and Reciprocal space.

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**Lesson Plan**

Name of the Assistant/ Associate Professor: Mrs. SPANTOSHI KURRA  
 Class and Section: B.Sc. VI<sup>th</sup> SEM. SEC. A  
 Subject: PHYSICS Theory (1-3)

Week	Date	Topics	
1	1-Feb-18	/	
	2-Feb-18		
	3-Feb-18		
	4-Feb-18		Sunday
2	5-Feb-18	Physical significance of k-space and Reciprocal space	
	6-Feb-18	Reciprocal lattice vectors	
	7-Feb-18	Reciprocal lattice to simple cubic	
	8-Feb-18	/	
	9-Feb-18		
	10-Feb-18	Maharshi Dayanand Saraswati Jayanti	
	11-Feb-18	Sunday	
	3	12-Feb-18	Reciprocal lattice to b.c.c and f.c.c.
13-Feb-18		Maha Shivratri	
14-Feb-18		Doubts and Numerical Problems	
15-Feb-18		/	
16-Feb-18			
17-Feb-18			
18-Feb-18		Sunday	
4		19-Feb-18	Test of Unit II
	20-Feb-18	Historical Introduction and survey of superconductivity.	
	21-Feb-18	Superconducting systems, High T <sub>c</sub> superconductors.	
	22-Feb-18	/	
	23-Feb-18		Test
	24-Feb-18		
	25-Feb-18	Sunday	
5	26-Feb-18	Isotopic Effect, Critical magnetic field	
	27-Feb-18	Meissner effect and London Theory	
	28-Feb-18	10 <sup>th</sup> Vacations	

UNIT II

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**Lesson Plan**

Name of the Assistant/ Associate Professor: Mrs. SANTOSH KURRA

Class and Section: B.Sc. VI<sup>th</sup> SEM SEC A (1-3)

Subject: PHYSICS Theory

Week	Date	Topics
1	1-Mar-18	Guru Ravidas Birthday
	2-Mar-18	Holi
	3-Mar-18	<u>Low vacations</u>
	4-Mar-18	Sunday
2	5-Mar-18	London Equation and Pippard's equation.
	6-Mar-18	Classification of superconductors (Type I and Type II)
	7-Mar-18	BCS Theory of superconductivity, Flux quantization.
	8-Mar-18	
	9-Mar-18	
	10-Mar-18	
	11-Mar-18	Sunday
	12-Mar-18	
3	12-Mar-18	Josephson Effect (AC and DC)
	13-Mar-18	Practical applications of superconductivity and limitations.
	14-Mar-18	Power applications of superconductors.
	15-Mar-18	
	16-Mar-18	
	17-Mar-18	
	18-Mar-18	Sunday
4	19-Mar-18	Doubts and numericals.
	20-Mar-18	Test of Unit III
	21-Mar-18	Definition and length scale (Nano).
	22-Mar-18	
	23-Mar-18	Shaheedi Diwas of Bhagat Singh, Rajguru & Sukhdev
	24-Mar-18	
	25-Mar-18	Sunday/ Ram Navami
5	26-Mar-18	Importance of Nano scale and Technology.
	27-Mar-18	History of Nano Technology, Molecular assembler concept.
	28-Mar-18	Benefits and challenges in molecular manufacturing.
	29-Mar-18	Mahavir Jayanti
	30-Mar-18	
	31-Mar-18	

UNIT IV

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SANTOSH KURRA

**Lesson Plan**

Name of the Assistant/ Associate Professor..... MRS. SANTOSH KURAA

Class and Section:..... B.Sc. VI SEM. A (1-3)

Subject:..... PHYSICS Theory

Week	Date	Topics
1		Sunday
	1-Apr-18	
	2-Apr-18	Understanding advanced capabilities
	3-Apr-18	Vision and objective of Nano-technology.
	4-Apr-18	Nanotechnology in different fields, Automobiles, Electronics
	5-Apr-18	
	6-Apr-18	
	7-Apr-18	
2	8-Apr-18	Sunday
	9-Apr-18	Nanotechnology in Medicine, biotech materials.
	10-Apr-18	Doubts and others practical problems.
	11-Apr-18	Test of Unit IV
	12-Apr-18	
	13-Apr-18	
	14-Apr-18	Dr Ambedkar Jayanti / Vaisakhi
	15-Apr-18	Sunday
3	16-Apr-18	Revision of Unit I & II
	17-Apr-18	Revision of Unit III and IV
	18-Apr-18	Parashurama Jayanti
	19-Apr-18	Revision
	20-Apr-18	Test Univ. Practical Exams
	21-Apr-18	— U.P.E. —
	22-Apr-18	Sunday
4	23-Apr-18	Revision — U.P.E. —
	24-Apr-18	Revision — U.P.E. —
	25-Apr-18	Revision U.P.E. —
	26-Apr-18	— U.P.E. —
	27-Apr-18	— U.P.E. —
	28-Apr-18	— U.P.E. —

  
 SANTOSH KURAA