

X

NPTEL

reviewer4@nptel.iitm.ac.in ▼

Courses » Symmetry and Structure in the Solid State

Announcements **Course** Ask a Question Progress FAQ

# Unit 14 - Structure Determination Methodologies 1

Register for  
Certification exam

## Course outline

How to access  
the portal

Basics of  
Symmetry 1 :  
Generation of  
Point Groups

Basics of  
Symmetry 2:  
Detailed  
Understanding  
of 32 Point  
Groups

Assignment of  
Point Groups to  
Crystal Systems  
and Bravais  
Lattice

Basics of  
Symmetry 4:  
Space Group  
Description And  
Introduction to  
the International  
Tables of  
Crystallography(ITC-  
Vol. A).

Correlation  
Between  
Symmetry  
Diagrams and

## week 10- assignment 10

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2019-04-10, 23:59 IST.**

1) Which equation describes the Friedel's law? **2 points**

- $I(hkl) = I(-hkl)$
- $I(hkl) = I(h-k-l)$
- $I(hkl) = I(-h-k-l)$
- $I(hkl) = I(-h-k-l)$

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

$I(hkl) = I(-h-k-l)$

2) How many Laue classes are there in Tetragonal system? **2 points**

- 4
- 6
- 2
- 1

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

2

3) A cubic lattice having lattice constant  $a = 5$  Angstrom. What will be the "d" value for (120) plane? **2 points**

- 5
- 3.569

© 2014 NPTEL - Privacy & Terms - Honor Code - FAQs -

A project of



NPTEL

National Programme on  
Technology Enhanced Learning

In association with

NASSCOM®

Funded by

|  |   |                 |
|--|---|-----------------|
| <b>Notations.</b>  | 2.236   |                 |
| <b>Interaction Session</b>                                     | 4) A Tetragonal system having $a=b=5$ Angstrom and $c=10$ Angstrom. What will be the "d" value for (125) plane? | <b>2 points</b> |
| <b>Text Transcripts</b>  | <input type="radio"/> 2.2222  |                 |
| <b>Basics of X Ray Diffraction 1</b>                           | <input type="radio"/> 1.4899  |                 |
| <b>Basics of X Ray Diffraction 2</b>                           | <input type="radio"/> 1.7682  |                 |
| <b>Bragg's Law in Reciprocal Space</b>                         | <input type="radio"/> 3.6589  |                 |
| <b>Structure Determination Methodologies 1</b>                 | <b>No, the answer is incorrect.</b><br><b>Score: 0</b><br><b>Accepted Answers:</b><br>1.4899                    |                 |
| <input type="radio"/> Quiz : week 10-assignment 10             | 5) The position of a hydrogen atom can be identified by.  | <b>2 points</b> |
| <input type="radio"/> Systematic Absences 3                    | <input type="radio"/> Difference Fourier map  |                 |
| <input type="radio"/> Friedel's Law and Laue classes           | <input type="radio"/> Reflection Intensity  |                 |
| <input type="radio"/> Experimental Aspects of Data Collection  | <input type="radio"/> Reciprocal lattice spacing  |                 |
| <input type="radio"/> Structure Determination 1                | <input type="radio"/> Electron density map  |                 |
| <input type="radio"/> Structure Determination 2                | <b>No, the answer is incorrect.</b><br><b>Score: 0</b><br><b>Accepted Answers:</b><br>Difference Fourier map    |                 |
| <b>Structure Determination Methodologies 2</b>                 | 6) Calculate the Lorentz factor "L" at $\theta = 15$ deg.   | <b>2 points</b> |
| <b>Powder Diffraction Method &amp; Quantum Crystallography</b> | <input type="radio"/> 2   |                 |
|  | <input type="radio"/> 1.5   |                 |
|  | <input type="radio"/> 4   |                 |
|  | <input type="radio"/> 0.5   |                 |
|  | <b>No, the answer is incorrect.</b><br><b>Score: 0</b><br><b>Accepted Answers:</b><br>2                         |                 |
|  | 7) What will be the value of Polarization factor "P" at $\theta=45$ deg.  | <b>2 points</b> |
|  | <input type="radio"/> 0.75  |                 |
|  | <input type="radio"/> 0.5   |                 |
|  | <input type="radio"/> 1   |                 |
|  | <input type="radio"/> 2   |                 |
|  | <b>No, the answer is incorrect.</b><br><b>Score: 0</b><br><b>Accepted Answers:</b><br>0.5                       |                 |

[Previous Page](#)[End](#)

