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NPTEL

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Courses » Symmetry and Structure in the Solid State

Announcements **Course** Ask a Question Progress FAQ

Unit 15 - Structure Determination Methodologies 2

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 11 - Assignment 11

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2019-04-17, 23:59 IST.**

1) Total number of Patterson peaks will generate for 4 atoms **2 points**

- 1
 4
 9
 16

No, the answer is incorrect.

Score: 0

Accepted Answers:

16

2) Identify the symmetry elements from Harker peaks $u/2$ w and $0\ v\ 0$ **2 points**

- $2_1 \parallel b$ and $m \perp b$
 $2 \parallel b$ and b -glide $\perp c$
 $m \perp b$ and c -glide $\perp b$
 NOTA

No, the answer is incorrect.

Score: 0

Accepted Answers:

$2_1 \parallel b$ and $m \perp b$

3) How the value of **B** will change with increasing temperature? **2 points**

- Decreases
 Increases
 Remain constant

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Notations.	ce De	4) Identify the symmetry elements for Harker peaks at $u=0, w=0, v=1/2$	2 points
Interaction Session		<input type="radio"/> $2_1 \parallel b$ and a-glide $\perp b$ <input type="radio"/> $2 \parallel b$ and c-glide $\perp b$ <input type="radio"/> $m \perp b$ and a-glide $\perp c$ <input type="radio"/> NOTA	
Text Transcripts		No, the answer is incorrect.	
Basics of X Ray Diffraction 1		Score: 0	
Basics of X Ray Diffraction 2		Accepted Answers: $2 \parallel b$ and c-glide $\perp b$	
Bragg's Law in Reciprocal Space		5) Calculate the Lorentz factor at $\theta = 45$ degree	2 points
Structure Determination Methodologies 1		<input type="radio"/> 1 <input type="radio"/> 1/2 <input type="radio"/> 0 <input type="radio"/> 5	
Structure Determination Methodologies 2		No, the answer is incorrect.	
Quiz : Week 11 - Assignment 11		Score: 0	
Data Reduction		Accepted Answers: 1	
Fourier Syntheses		6) What will be the value of Polarization factor "p" at $\theta = 30$ degree	2 points
Patterson Method 1		<input type="radio"/> 7/8 <input type="radio"/> 5/8 <input type="radio"/> 3/4 <input type="radio"/> NOTA	
Patterson Method 2		No, the answer is incorrect.	
Direct Method		Score: 0	
Powder Diffraction Method & Quantum Crystallography		Accepted Answers: 5/8	
		7) Which are the correct Laue conditions	2 points
		<input type="checkbox"/> $a_1(s-s_0)/\lambda = h_1$ <input type="checkbox"/> $a_3(s-s_0)/\lambda = h_3$ <input type="checkbox"/> $a_3(s-s_0)/\lambda = h_1$ <input type="checkbox"/> $a_1(s-s_0)/\lambda = h_2$	
		No, the answer is incorrect.	
		Score: 0	
		Accepted Answers: $a_1(s-s_0)/\lambda = h_1$ $a_3(s-s_0)/\lambda = h_3$	

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