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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 11 - Basics of X Ray Diffraction 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 7- Assignment 7

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-03-20, 23:59 IST.**

1) Length of scattering vector depends on the wavelength *2 points*

- inversely
- directly
- independently
- NOTA

No, the answer is incorrect.
Score: 0

Accepted Answers:
inversely

2) Length of scattering vector is directly proportional with *2 points*

- cos θ
- sinθ
- tanθ
- NOTA

No, the answer is incorrect.
Score: 0

Accepted Answers:
sinθ

3) Find out the relationship of d spacing with sinθ and λ *2 points*

- inversely and directly
- both inversely
- directly and inversely

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Basics of X Ray Diffraction 1

- Quiz : Week 7- Assignment 7
- Interference of Waves
- X Ray Scattering ; optical Analogy
- X Ray Scattering ; Fourier transforms
- X Ray Scattering; Deriving Laue Conditions from scattering theory
- X Ray Scattering ; Laue conditions to Bragg 's Law, Introduction to Reciprocal lattice

Basics of X Ray Diffraction 2

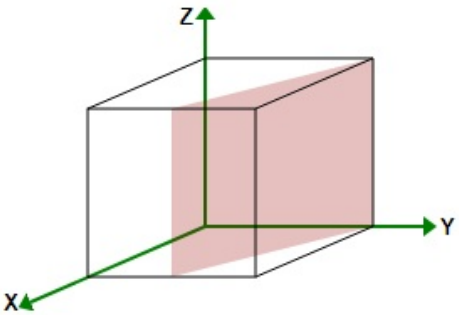
Bragg's Law in Reciprocal Space

Structure Determination Methodologies 1

Structure Determination Methodologies 2

Powder Diffraction Method & Quantum Crystallography

4) Identify the miller indices of the marked plane ***2 points***

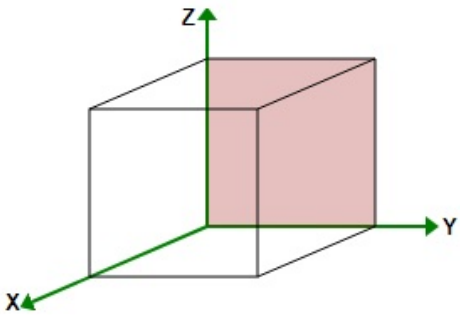


- 1 2 3
- -1 -2 0
- 2 1 3
- 3 4 0

No, the answer is incorrect.
Score: 0

Accepted Answers:
-1 -2 0

5) Identify the miller indices of the marked plane ***2 points***

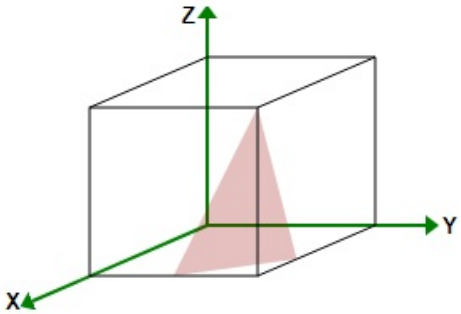


- 1 1 1
- -1 0 0
- 0 1 0
- 0 2 0

No, the answer is incorrect.
Score: 0

Accepted Answers:
-1 0 0

6) Identify the miller indices of the marked planes ***2 points***



- 3 1 2
- 2 1 0
- -1 0 -3
- -3 -2 1

No, the answer is incorrect.
Score: 0

Accepted Answers:
-3 -2 1

7) When writing the index for a set of symmetrically related planes, which type of brackets should be used? ***2 points***

- (Round)
- {Curly}
- <triangular>
- [Square]

No, the answer is incorrect.
Score: 0

Accepted Answers:
{Curly}

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