

X

NPTEL

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Courses » Fundamentals of X-ray diffraction and Transmission electron microscopy

Announcements Course Ask a Question Progress

Unit 6 - Week 5



Course outline

How to access the portal

Week 1

Week 2

Week 3

Week 4

Week 5

- Lecture 13 - XRD Tutorial - 1
- Lecture 14 - XRD tutorial - 2
- Lecture 15 - Introduction to Transmission Electron Microscopy (TEM)
- Quiz : Week 5 - Assignment

Week 6

Week 7

Week 8

Week 5 - Assignment

The due date for submitting this assignment has passed. **Due on 2016-08-28, 22:00 IST**
As per our records you have not submitted this assignment.

1) What are the first three allowed reflections for the body centered cubic materials? 1 point

- 100, 110, 111
- 110, 200, 211
- 111, 200, 220
- 110, 111, 200

No, the answer is incorrect.**Score: 0****Accepted Answers:**

110, 200, 211

2) _____ law has to be satisfied by a beam to undergo diffraction

No, the answer is incorrect.**Score: 0****Feedback:**

Bragg's

Accepted Answers:

(Type: String) Bragg's

(Type: String) Bragg

(Type: String) Braggs

1 point

3) Let two materials having same crystal structure is analysed using XRD. What are the parameters that distinguishes both of the reflections? 1 point

- θ and λ
- θ and d
- d and λ
- None of the above

No, the answer is incorrect.**Score: 0****Accepted Answers:** θ and d 4) What information one can obtain from a material by using TEM? 1 point

- Crystal structure
- Lattice repeat distance
- Crystallographic symmetry

- All of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

All of the above

5) _____ type of source gives better contrast than thermionic emission electron source

No, the answer is incorrect.

Score: 0

Feedback:

field emission

Accepted Answers:

(Type: String) field emission

(Type: String) field emission gun

(Type: String) fieldemissiongun

6) Comparing SEM and TEM, which of the following statment is true?

- TEM has no depth sensitivity
- SEM has no depth sensitivity
- TEM has more depth sensitivity than SEM
- TEM has less depth sensitivity than SEM

No, the answer is incorrect.

Score: 0

Accepted Answers:

TEM has no depth sensitivity

7) What are the inelastic scattering processes that occur in TEM?

- Generation of x rays
- Generation of secondary electrons
- Collective interaction with many atoms
- All of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

All of the above



1 point

1 point

1 point

Previous Page

End



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