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NPTEL

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

Announcements Course Ask a Question Progress



Unit 8 - Week 7

Course outline

How to access the portal

Week 1

Week 2

Week 3

Week 4

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Week 6

Week 7

- Lecture 19 - TEM Imaging 1
- Lecture 20 - TEM Imaging - 2
- Lecture 21 - TEM instrument demonstration
- Quiz : Week 7 - Assignment

Week 8

Week 7 - Assignment

The due date for submitting this assignment has passed. **Due on 2016-09-07, 22:00 IST**
As per our records you have not submitted this assignment.

1) Which one of the following assumption was made in Kinematic theory of diffraction? 1 point

- No interaction between incident and scattered rays
- Scattered waves do not lose energy
- Waves are scattered only once
- All of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

All of the above

2) _____ material is commonly used as a thermionic source in electron gun 1 point

- Tungsten
- Copper
- ZrO₂
- Aluminium

No, the answer is incorrect.

Score: 0

Accepted Answers:

Tungsten

3) Electrons trace a _____ path inside the TEM column 1 point

- helical (or) spiral
- straight
- sinusoidal
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

helical (or) spiral

4) _____ lens controls the beam size and intensity of electron beam

Hint

No, the answer is incorrect.

Score: 0

Accepted Answers:*(Type: String) condenser*

1 point

5) _____ aperture controls the intensity of the electron beam coming out from the sample to form image **1 point**

- Condenser
- objective
- SAD

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

6) _____ is observed if the sample is bent **1 point**

- Contours
- fringes
- both a and b

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

7) Spot kind of diffraction pattern arises from _____ materials **1 point**

- Amorphous
- Crystalline
- polymer
- None of the above

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

8) _____ contrast mechanism contributes to TEM image **1 point**

- Mass/thickness
- Diffraction
- Phase
- All of the above

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

9) _____ contrast mechanism results in lattice fringes in high resolution images

Hint

No, the answer is incorrect.**Score: 0****Accepted Answers:***(Type: String) phase*

1 point



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