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NPTEL

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

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Unit 7 - Week 6

Course outline

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○ Lecture 16 - Fundamentals of Transmission Electron Microscopy (TEM)

○ Lecture 17 - Basics of Diffraction-1

○ Lecture 18 - Basics of Diffraction-2

○ Quiz : Week 6 - Assignment

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Week 6 - Assignment

The due date for submitting this assignment has passed. **Due on 2016-09-04, 22:00 IST.**
As per our records you have not submitted this assignment.

1) What is the nature of relationship between the wavelength of the electron beam and the applied voltage   **1 point**

○ Directly proportional
○ Inversely proportional
○ Cubic
○ Quadratic

No, the answer is incorrect.
Score: 0

Accepted Answers:
Inversely proportional

2) Which among the following is obtained from the back-focal plane of an objective lens   **1 point**

○ Morphology
○ SAD pattern
○ Lattice Fringes
○ Contour

No, the answer is incorrect.
Score: 0

Accepted Answers:
SAD pattern

3) In the equation Rd = Lλ, (RHS) the right hand side is commonly known as ....   **1 point**

○ Camera length
○ Camera Wavelength
○ Camera constant
○ Amplitude

No, the answer is incorrect.
Score: 0

Accepted Answers:
Camera constant

4) The image obtained, when the direct beam is blocked by the aperture while one or more diffracted beams are allowed to pass the objective aperture, is known as   **1 point**

○ Bright firld image
○ White image

○ Dark field image
○ Fringes

No, the answer is incorrect.
Score: 0

Accepted Answers:
Dark field image

5) What does a point in reciprocal space correspond to in real space? *1 point*

○ Lattice point
○ Crystal structure
○ Plane
○ Unit cell

No, the answer is incorrect.
Score: 0

Accepted Answers:
Plane

6) The reciprocal lattice of an FCC lattice is? *1 point*

○ HCP
○ Simple cubic
○ BCC
○ Base Centered Tetragonal

No, the answer is incorrect.
Score: 0

Accepted Answers:
BCC

7) In a convergent beam electron diffraction, the diffraction pattern appears as...... *1 point*

○ Set of rings
○ Set of spots
○ Set of lines
○ Set of discs

No, the answer is incorrect.
Score: 0

Accepted Answers:
Set of discs

8) Kikuchi pattern is produced because of........ *1 point*

○ Elastic scattering
○ Coherent scattering
○ Inelastic scattering
○ Linear scattering

No, the answer is incorrect.
Score: 0

Accepted Answers:
Inelastic scattering

9) The minimum distance from the Ewald sphere to the reciprocal lattice point is defined as........... *1 point*

○ Lattice parameter
○ Interplanar spacing
○ Camera length
○ Deviation parameter

No, the answer is incorrect.
Score: 0

Accepted Answers:
Deviation parameter

10) If you increase the camera length, what will happen to the diffraction pattern?   **1 point**

  ○ Move apart
  ○ Comes closer
  ○ Rotates
  ○ Stays as such

No, the answer is incorrect.
Score: 0

Accepted Answers:
Move apart

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