Week 2 - Assignment

The due date for submitting this assignment has passed. **Due on 2016-08-12, 22:00 IST**
As per our records you have not submitted this assignment.

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

- Motif
- Plane
- Unit cell
- Crystal structure

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

2) What is defined as the locus of the farthest points of the Ewald sphere when rotated in all orientations

- Finite sphere
- Limiting sphere
- Closed sphere
- Bound sphere

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

3) In the equation for the lattice vectors of a reciprocal space, what does the denominator signifies?

- Unit cell dimensions
- Unit cell volume
- Real lattice parameters
- Interplanar spacing

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

4) Compton effect is .................

- Inelastic collision of photon and electron
- Coherent scattering of photon and electron
Elastic collision of photon and electron
Incoherent scattering of photon and electron

No, the answer is incorrect.
Score: 0
Accepted Answers:
Elastic collision of photon and electron

5) ............... describes the efficiency of scattering of given atom in given direction

- Lorentz-Polarization factor
- Temperature factor
- Atomic scattering factor
- Multiplicity factor

No, the answer is incorrect.
Score: 0
Accepted Answers:
Atomic scattering factor

6) What is the nature of relationship between the intensity of the diffracted beam (I) and the structure factor (F)?

- Linear
- Inverse
- Cubic
- Quadratic

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

7) What is the necessary conditions (in terms of miller indices) for the occurrence of constructive interference in an FCC crystal.

- h, k, l should be mixed
- h+k+l should be even
- h+k+l should be odd
- h, k, l should be unmixed

No, the answer is incorrect.
Score: 0
Accepted Answers:
h, k, l should be unmixed

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

- 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

9) In Laue method of diffraction experiment _____ is fixed and _____ is varied

- θ and λ
- λ and θ
- both λ and θ is fixed
- None of the above
Debye-Scherrer camera was first employed for ............?

- Single crystal diffraction
- Powder diffraction
- Spectroscopy
- Imaging

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