Week 3 - Assignment

The due date for submitting this assignment has passed. Due on 2016-08-14, 22:00 IST. As per our records you have not submitted this assignment.

1) For a cubic crystal system, the multiplicity factor for the {111} family is?
   - 6
   - 12
   - 8
   - 4

   No, the answer is incorrect.
   Score: 0
   Accepted Answers: 8

2) The unit of linear absorption coefficient is.....?
   - \( \text{m}^{-1} \)
   - \( \text{m} \)
   - \( \text{m}^2 \)
   - \( \text{m}^{1/2} \)

   No, the answer is incorrect.
   Score: 0
   Accepted Answers: \( \text{m}^{-1} \)

3) What is the nature of relationship between Lorentz-Polarization factor with bragg angle?
   - Increases linearly
   - Decreases linearly
   - Decreases parabolically to a value and then increases
   - Increases parabolically to a value and then decreases

   No, the answer is incorrect.
   Score: 0
   Accepted Answers: Decreases parabolically to a value and then increases

4) The temperature factor pertaining to the intensity of the diffracted beams depends on......?
   - Amplitude of thermal vibrations
   - Resonance
   - Diffusion

   1 point
Dispersion

No, the answer is incorrect.
Score: 0

Accepted Answers:
Amplitude of thermal vibrations

5) Scherrer formula is used to calculate the.......?

- Grain size
- Lattice parameter
- Crystallite size
- Particle size

No, the answer is incorrect.
Score: 0

Accepted Answers:
Crystallite size

6) With the decrease in the crystallite size, what will happen to the diffraction peaks?

- It will shift
- It will broaden
- It will disappear
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
It will broaden

7) Development of uniform strain in a crystal will lead to.......?

- Peak shifting
- Peak broadening
- Asymmetry in the peaks
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Peak shifting

8) In the Williamson-Hall plot, the slope of the straight line gives the ......?

- Microstrain in the material
- Crystallite size
- Lattice parameter
- Interplanar spacing

No, the answer is incorrect.
Score: 0

Accepted Answers:
Microstrain in the material

9) Which among the following factors cause asymmetry in the diffraction pattern?

- Crystallite size
- Microstrain
- Stacking faults
- Alloying

No, the answer is incorrect.
Score: 0

Accepted Answers:
Stacking faults

10. Which among the following profile fits is used for a Strain broadened peak?

- Lorentz fit
- Gaussian fit
- Voigt fit
- Pearson fit

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