Week 9 - Assignment 9

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2019-04-03, 23:59 IST.

1) What is the radius of Ewald sphere?

- $\frac{1}{\lambda}$
- $\frac{2}{\lambda}$
- $\frac{3}{\lambda}$
- $\frac{4}{\lambda}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{2}{\lambda}$

2) What is the radius of limiting sphere?

- $\frac{2}{\lambda}$
- $\frac{4}{\lambda}$
- $\frac{2}{\lambda}$
- $\frac{3}{\lambda}$

No, the answer is incorrect.

Score: 0

Accepted Answers:

- $\frac{2}{\lambda}$

3) Find out the total number of possible reflections for a cubic crystal with $a=10\text{Å}$ by using a wavelength $\lambda=1\text{Å}$.

- 4088
- 4288

Score: 0

Accepted Answers:

- 4088
- 4288
4) Find out total number of possible reflections in a limiting sphere of a tetragonal crystal with \( a = b = 5 \text{Å} \) and \( c = 20 \text{Å} \) by using a wavelength \( \lambda = 2 \text{Å} \).

- 1094
- 2094
- 3094
- 262

No, the answer is incorrect.
Score: 0
Accepted Answers: 2094

5) A crystal has a set of reflections \((1,1,1), (2,0,0), (2,2,0), (3,1,1)\) and \((2,2,2)\) observed from X-ray diffraction. Find out the lattice type.

- P
- I
- F
- C

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

6) Identify the space group of a crystal from the reflections present \(200, 020, 002, 400, 040, 004, 800, 060, 008\).

- \(P_{21_2121}\)
- \(P_{bca}\)
- \(P_{ca2}\)
- \(I_2_21_21\)

No, the answer is incorrect.
Score: 0
Accepted Answers: \(P_{21_2121}\)

7) Identify the space group from the reflection conditions

\[ h0l: \ l = 2n \]
\[ 0k0: \ k = 2n \]

- Pc
- \(P_2_1\)
- \(P_{21/c}\)
- \(C_{2/c}\)

No, the answer is incorrect.
Score: 0
Accepted Answers: \(P_{21/c}\)