

Unit 9 - Week 4

Course outline

How does an NPTEL online course work?

MATLAB

MATLAB_SCRIPTS

LAMMPS_SCRIPTS

Installation_Procedure

Week 1

Week 2

Week 3

Week 4

The Space groups

Generation of crystals

Week 4 lecture materials

Quiz : Assignment 4

Week 4 Feedback : Foundations of Computational Materials Modelling

Week 5

Week 6

Week 7

Week 8

Week 9

Week 10

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Week 12

Additional Documents

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Text Transcripts

Assignment 4

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

Due on 2020-02-26, 23:59 IST.

1) Which of the following space group has orthorhombic structure? 2 points

- $P2_1/m$
- $P4_2m$
- $Pmc2_1$
- $P3_112$

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $Pmc2_1$

2) Which of the following space group does not have a cubic structure? 2 points

- $P2_1c$
- $P4_232$
- $Fm\bar{3}m$
- $P2_13$

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $P2_1c$

3) For FCC structure, the value of α , β and γ in primitive unit cell are 90° 2 points

- True
- False

No, the answer is incorrect.
Score: 0

Accepted Answers:
False

4) Primitive unit cell can be visualize in "materialsproject.org" website? 2 points

- True
- False

No, the answer is incorrect.
Score: 0

Accepted Answers:
True

5) A material belongs to the $P\bar{4}2_1m$ space group. If there is one atom at position $8f$ and one at $4d$, the number of basis atoms inside the unit cell is _____ 2 points

- 10
- 12
- 9
- 8

No, the answer is incorrect.
Score: 0

Accepted Answers:
12

6) Fill in the blanks: 2 points

In question 5, the point group of this crystal is _____

- m
- $\bar{4}2m$
- $42m$
- 42_1m

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $\bar{4}2m$

7) In question 5,

the crystal system of this crystal is _____

- tetragonal
- hexagonal
- triclinic
- cubic

No, the answer is incorrect.
Score: 0

Accepted Answers:
tetragonal

8) Which of the following Wyckoff position does not belong to space group $P6_3cm$? 2 points

- 6c
- 3a
- 4b
- 12d

No, the answer is incorrect.
Score: 0

Accepted Answers:
3a

9) If the point group of a certain material is 1 or $\bar{1}$ the crystal system of that material is 2 points

- tetragonal
- hexagonal
- triclinic
- cubic

No, the answer is incorrect.
Score: 0

Accepted Answers:
triclinic

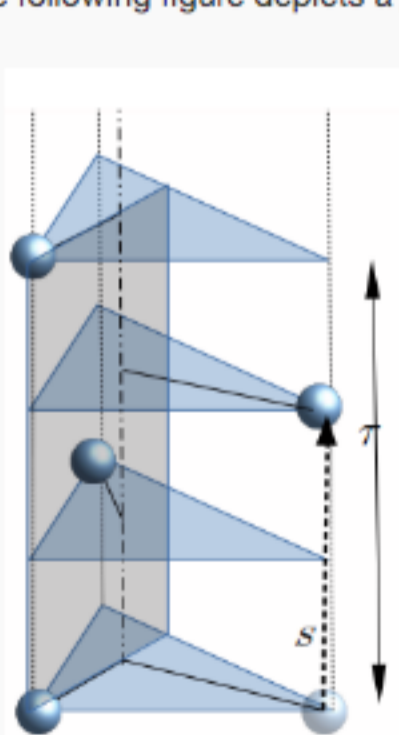
10) If the crystal system of certain material is monoclinic, then the point group of that material should be a _____ fold rotation and/or a _____ 2 points

- 3 fold rotation and/or a glide plane
- 2 fold rotation and/or a glide plane
- 3 fold rotation and/or a mirror
- 2 fold rotation and/or a mirror

No, the answer is incorrect.
Score: 0

Accepted Answers:
2 fold rotation and/or a mirror

11) The following figure depicts a _____ 2 points



- 2_3 axis
- 4 axis
- 3_2 axis
- 4_2

No, the answer is incorrect.
Score: 0

Accepted Answers:
 3_2 axis