Assignment 6

The due date for submitting this assignment has passed. By our records, you have not submitted it or any assignment.

Due on 2023-04-06, 23:59 IST.

1. If a planet cuts the x, y, and z axes at -4, -8, and -13 respectively, what is its Miller index of the planet? (1 point)

2. An 8-cell cube has the following dimensions: it is a 8 x 8 x 8 cm cube. What is its volume? (1 point)

3. Which statement is true?
   - HCDP is more plastic than BOC which is more plastic than IOC.
   - HCDP is more plastic than BOC which is more plastic than IOC.
   - HCDP is less plastic than BOC which is less plastic than IOC.
   - HCDP is less plastic than BOC which is less plastic than IOC.

4. The atomic packing factor of iron decreases by what % when it is cooled from 1600°C to 800°C? (2 points)

5. How much is x? (2 points)

6. How much is y? (1 point)

7. Polyvinyl alcohol is a polymer. (1 point)

8. Polyvinyl alcohol is a polymer.
   - isomeric
   - hydrophobic
   - thermoset
   - thermoplastic

9. Which statement is true?
   - Polycrystalline is a polymer.
   - Polycrystalline is a polymer.
   - PET is a polymer.
   - Polypropylene is a polymer.

10. What is the number of repeat units in a polyethylene chain? (2 points)

11. Each molecule of CaCO₃ (CaO) is composed of 3 CaO molecules. How many total moles of CaCO₃ are present in a 500-g sample? (2 points)

12. If a substance has a density of 1.5 g/cm³, what is its mass in kg? (1 point)