Assignment 4

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. Due on 2019-02-27, 23:59 IST.

1) If the radius ratio of cations to anions, $R_C/R_A = 0.45$, what will be the local coordination of anions around the cation? 1 point

- Triangular
- Tetrahedral
- Octahedral
- Cubic

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

2) The carbon atoms in C$_{60}$ molecule are located at the vertices of a/an __________. 1 point

- icosahedron
- dodecahedron
- truncated icosahedron
- tetrakaidecahedron

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

3) What is the coordination number of ZnS predicted based on the radius ratio? $R_{Zn^{2+}} = 0.83$ Å, $R_{S^{2-}} = 1.74$ Å 1 point

- 6

No, the answer is incorrect.
Score: 0
4) In isotactic polystyrene, the \( \text{C}_6\text{H}_5 \) side group

- appear on the same side of the main chain
- appear alternately on either side of the main chain
- appear randomly on either side of the main chain
- none of the above

**No, the answer is incorrect.**

**Score:** 0

**Accepted Answers:**

- appear on the same side of the main chain

5) Which of the following is a zig-zag carbon nanotube?

- \((5,5)\)
- \((5,1)\)
- \((5,0)\)
- \((10,5)\)

**No, the answer is incorrect.**

**Score:** 0

**Accepted Answers:**

- \((5,0)\)

6) The monomer of polyacrylonitrile has _____ and _____ as subgroups.

- one CN group and three H atoms
- one \( \text{C}_6\text{H}_5 \) and three H atoms
- two CN groups and two H atoms
- one Cl group and three H atoms

**No, the answer is incorrect.**

**Score:** 0

**Accepted Answers:**

- one CN group and three H atoms

7) The effective number of lattice points per unit cell in the lattice of CsCl is _____ and that in the lattice of NaCl is _____.

- two, four
- one, two
- two, one
- one, four

**No, the answer is incorrect.**

**Score:** 0

**Accepted Answers:**

- one, four

8) The nature of bonding between the chains in a thermoplastic is

- van der Waal’s forces
- covalent bonds
- metallic bond
9) “Soda addition to silicate glasses increases its melting point.” True/False?  
   - True  
   - False  

   No, the answer is incorrect.  
   Score: 0  
   Accepted Answers:  
   van der Waal's forces

10) Which of the following types of polymers is least likely to crystallize?  
   - Syndiotactic polymers  
   - Isotactic polymers  
   - Block copolymers  
   - Alternating copolymers

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