

Online test EBS209 2020/2021

- Each crystal face can be identified by two angular measurements, ϕ (Phi) and ρ (Rho). Which statement is correct about the angle.
 - Rho angle is the angle measured from the c-crystallographic axis to the line perpendicular to the face.
 - Rho angle is the angle measured from the b-crystallographic axis to the line perpendicular to the face.
 - Rho angle is the angle measured from the a-crystallographic axis to the line perpendicular to the face.
- The following notation for miller Indices is correct, except
 - [hkl] represents a direction
 - {hkl} represents a family of directions
 - (hkl) represents a plane
 - {hkl} represents a family of planes
- Which of the following is not accurate about Unit cell:
 - A subdivision of the lattice that still retains the overall characteristics of the entire lattice.
 - A unit cell is the most basic and least volume consuming repeating structure of any solid
 - When the unit cell repeats itself, the network is called a Basis.
 - the unit cell defines the basic building blocks of the crystal
- Calculation of the theoretical density of the unit cell require several data except:
 - Number of atoms
 - Atomic weight
 - Volume of unit cell
 - Avogadro's number
 - No of molecules per unit cell
- A body-centered lattice is one of the Bravais lattice type. The following statement is true about a body-centered lattice of the unit cell of the crystal system: (Two answer)
 - Containing total of 2 atoms
 - Containing total of 4 atoms
 - Tetragonal has body center lattice
 - Lattice at the center of Three pairs of faces
- Continuous vectorial properties depend on direction, along any given direction the property is the same. Which of this property is not a continuous vectorial properties?
 - Hardness
 - Thermal Expansion
 - Electrical Conductivity
 - Growth Rate
- Which of the crystal system and the example of the mineral is not true.
 - Triclinic-Kyanite
 - Tetragonal-Chalcopyrite
 - Cubic-galena
 - Orthorhombic-sphalerite
- A crystal may possess only certain combinations of symmetry elements. Only 14 possibilities exist, and these are the 32 crystal classes that are grouped into six crystal systems. Every mineral belongs to one of these crystal classes. (True or False)
- Different crystals have different shapes and forms because of the:

- a. stacking of the unit cells
 - b. External arrangement of the minerals
 - c. The close environment in which they grow
 - d. An indefinite chemical composition
10. Crystalline solids are those solids in which the atoms composing the solid have an orderly, repeated pattern. (True or False)