**1. Multiple Choice: 1: Which of the following is not an amor...**

|  |  |
| --- | --- |
| **Question** | Which of the following is not an amorphous material? |
| **Answer** | Glass  Rubbers  Question 1 - Correct Answer3 Lead  Plastic |

* **2. Multiple Choice: 2: The smallest portion of the lattice i...**

|  |  |
| --- | --- |
| **Question** | The smallest portion of the lattice is known as \_\_\_\_\_\_\_\_\_\_ |
| **Answer** | Lattice structure  Question 2 - Correct Answer2 Unit cell  Bravais crystal  Super cell |

* **3. Multiple Choice: 3: The axial relationship of a monoclini...**

|  |  |
| --- | --- |
| **Question** | The axial relationship of a monoclinic crystal system is given as \_\_\_\_\_\_\_\_\_\_\_ |
| **Answer** | a = b = c  a = b ≠ c  a ≠ b = c  Question 3 - Correct Answer4 a ≠ b ≠ c |

* **4. Multiple Choice: 4: A unit cell that contains lattice poi...**

|  |  |
| --- | --- |
| **Question** | A unit cell that contains lattice points only at the corners is known as \_\_\_\_\_\_\_\_\_ |
| **Answer** | Question 4 - Correct Answer1 Primitive unit cell  Non-primitive cell  Secondary unit cell  Reciprocal unit cell |

* **5. Multiple Choice: 5: The interfacial angles of a hexagonal...**

|  |  |
| --- | --- |
| **Question** | The interfacial angles of a hexagonal crystal system are given by \_\_\_\_\_\_\_\_\_\_ |
| **Answer** | α = β = ϒ = 90o  Question 5 - Correct Answer2 α = β = 90o ϒ = 120o  α = β = ϒ ≠ 90o  α ≠ β ≠ ϒ ≠ 90o |

* **6. Multiple Choice: 6: What is the coordination number of a ...**

|  |  |
| --- | --- |
| **Question** | What is the coordination number of a body centered cubic (BCC) structure? |
| **Answer** | 6  Question 6 - Correct Answer2 8  10  12 |

* **7. Multiple Choice: 7: There are 14 atoms in a unit cell of ...**

|  |  |
| --- | --- |
| **Question** | There are 14 atoms in a unit cell of \_\_\_\_\_\_\_\_\_\_ structure |
| **Answer** | BCC  Question 7 - Correct Answer2 FCC  HCP  SC |

* **8. Multiple Choice: 8: The entropy becomes zero at 0°K for a...**

|  |  |
| --- | --- |
| **Question** | The entropy becomes zero at 0°K for a \_\_\_\_\_\_\_\_\_ |
| **Answer** | Pure element  Question 8 - Correct Answer2 Perfect crystal  Random solid solution  Amorphous material |

* **9. True/False: 9: The first law of thermodynamics state...**

|  |  |
| --- | --- |
| **Question** | The first law of thermodynamics states that the energy of an isolated system is constant. |
| **Answer** | |  |  | | --- | --- | | Question 9 - Correct Answer - True | True | |  | False | |

* **10. Multiple Choice: 10: The reaction rate increases with incr...**

|  |  |
| --- | --- |
| **Question** | The reaction rate increases with increase in temperature, because \_\_\_\_\_ |
| **Answer** | Energy barrier decreases  Threshold energy increases  Question 10 - Correct Answer3 The number of molecules undergoing effective collision increases  Activation energy increases |

* **11. Multiple Choice: 11: For the reaction n1A + n2B → Products...**

|  |  |
| --- | --- |
| **Question** | For the reaction n1A + n2B → Products; rate = k [A]3[B]0 if concentration of A is doubled and  concentration of B is halved, then reaction rate will   \_\_\_\_\_\_\_\_\_\_\_\_ |
| **Answer** | Increases 3 times  increases 2 times  Question 11 - Correct Answer3 increases 8 times  remains same |

* **12. Multiple Choice: 12: The reactions having very high values...**

|  |  |
| --- | --- |
| **Question** | The reactions having very high values of energy of activation are generally \_\_\_\_\_\_\_\_\_ |
| **Answer** | Question 12 - Correct Answer1 Very slow  Very fast  Spontaneous  Medium fast |

* **13. Multiple Choice: 13: If the equilibrium constant for the r...**

|  |  |
| --- | --- |
| **Question** | If the equilibrium constant for the reaction (1) has a value of 4.0, what is the value of the  equilibrium constant for the reaction (2) at the same temperature?  A + 2B  C + 5/2 D                     (1)  2C + 5D  2A + 4B                      (2) |
| **Answer** | 0.25  Question 13 - Correct Answer2 0.063  2.0  8.0 |

* **14. True/False: 14: When liquid bromine is dissolved in w...**

|  |  |
| --- | --- |
| **Question** | When liquid bromine is dissolved in water, the entropy of the system decreases. |
| **Answer** | |  |  | | --- | --- | |  | True | | Question 14 - Correct Answer - False | False | |

* **15. Multiple Choice: 15: In the equilibrium            A-B   ⇌...**

|  |  |
| --- | --- |
| **Question** | In the equilibrium            A-B   ⇌  A   +   B  if the equilibrium concentration of A is doubled, the equilibrium  concentration of B would become: |
| **Answer** | Twice  Question 15 - Correct Answer2 Half  1/4th  1/8th |