Assignment 11
The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

1. Go on an electronic configuration of 3d^{6} and it is considered as transition metal. What is the symmetry point group of the isolated Cu atom? 1 point
   - D_{4h}
   - O_{h}
   - C_{2h}
   - T_{d}
   - None of these
   - No, the answer is incorrect.
   - Score: 0
   - Accepted Answers:
     - D_{4h}

2. In an octahedral ligand field, an orbit splits up into a set of degenerate orbitals as 1 point
   - t_{2g} and e^{2}
   - t_{2g} and e^{1}
   - t_{2g} and e^{3}
   - t_{2g} and e^{4}
   - None of these
   - No, the answer is incorrect.
   - Score: 0
   - Accepted Answers:
     - t_{2g} and e^{2}

3. Radii of the elements in the set of d-blocks in 2s, 3s, 4s, 5s and 6s orbitals is given by 1 point
   - S^{2} > T_{2g} > T_{1g} > T_{1u} > T_{2u}
   - S^{2} > T_{2g} > T_{1g} > T_{2u} > T_{1u}
   - S^{2} > T_{1g} > T_{2g} > T_{1u} > T_{2u}
   - S^{2} > T_{1g} > T_{2u} > T_{1u} > T_{2g}
   - None of these
   - No, the answer is incorrect.
   - Score: 0
   - Accepted Answers:
     - S^{2} > T_{2g} > T_{1g} > T_{1u} > T_{2u}

4. Electronic configurations that undergo Jahn-Teller distortion are 1 point
   - d^{3} and d^{2}
   - d^{3} and d^{1}
   - d^{3} and d^{2}
   - All of these
   - No, the answer is incorrect.
   - Score: 0
   - Accepted Answers:
     - All of these

5. Jahn-Teller distortion is more pronounced in 1 point
   - S^{2}/S^{2}
   - S^{2}/S^{2}
   - S^{2}/S^{2}
   - All of these will have same Jahn-Teller distortion
   - No, the answer is incorrect.
   - Score: 0
   - Accepted Answers:
     - S^{2}/S^{2}

6. Immunological response to Globular proteins lacks the symmetry of the molecule: 1 point
   - No, it lacks in symmetry
   - No, it loss in type C_{4v}
   - No, it loss in type C_{2v}
   - No, it loss in type C_{i}
   - No, the answer is incorrect.
   - Score: 0
   - Accepted Answers:
     - No, it lacks in symmetry

7. The type of spectroscopy depends on the _____, used. 1 point
   - Electrostatic radiation
   - Vibrational radiation
   - Material
   - Band length of the molecule
   - No, the answer is incorrect.
   - Score: 0
   - Accepted Answers:
     - Material

8. A simple harmonic function can be represented by sine waves. 0.5 points
   - True
   - False
   - No, the answer is incorrect.
   - Score: 0
   - Accepted Answers:
     - True

9. A simple harmonic function can be represented by cosine waves. 0.5 points
   - True
   - False
   - No, the answer is incorrect.
   - Score: 0
   - Accepted Answers:
     - False

10. A vector rotating in a xy plane with an angular frequency can represent a wave. 0.5 points
    - True
    - False
    - No, the answer is incorrect.
    - Score: 0
    - Accepted Answers:
      - True

11. Single atom can rotate in free space. 0.5 points
    - True
    - False
    - No, the answer is incorrect.
    - Score: 0
    - Accepted Answers:
      - True

12. Heteronuclear molecules can show _____ pattern but cannot show _____ pattern. 0 points
    - electronic, rotational
    - vibrational, rotational
    - vibrational, electronic
    - No, the answer is incorrect.
    - Score: 0
    - Accepted Answers:
      - vibrational, rotational

13. Form the _____ spatial lines, moment of ____ can be obtained that gives information about bond length. 0 points
    - Weighted, Unweighted, Bond, Lines
    - Weighted, Electron, Lines
    - All of these
    - No, the answer is incorrect.
    - Score: 0
    - Accepted Answers:
      - Weighted, Unweighted, Bond, Lines