Assignment 12

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

Due on 2018-10-24, 23:59 IST.

The following questions have one or more correct answer(s). Find them.

1) Jahn Teller distortion of an octahedral complex leads to a symmetry point group:
   - $O$
   - $D_{2h}$
   - $D_{3h}$
   - $D_{4h}$

   *No, the answer is incorrect.*
   *Score: 0*
   *Accepted Answers:*
   - $D_{4h}$

2) Jahn Teller distortion of an octahedral complex leads to splitting of the $t_{2g}$ group into
   - $a_{1g}$ and $e_g$
   - $b_{1g}$ and $e_g$
   - $b_{2g}$ and $e_g$
   - $a_{1g}$, $b_{1g}$ and $b_{2g}$

   *No, the answer is incorrect.*
   *Score: 0*
   *Accepted Answers:*
   - $b_{2g}$ and $e_g$

3) For an octahedral complex, the $\sigma$-SALCs of the co-ordinating ligand

*Score: 0*
4) Nonbonding MOs in an octahedral complex with σ-bonds only have the symmetry:
- $t_{1g}$
- $t_{2g}$
- $t_{1u}$
- $t_{2u}$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$t_{2g}$

5) For a trigonal bipyramidal complex, the axial bonds involve orbitals of symmetries
- $a_1$ only
- $a_2$ only
- $a_1$ and $a_2$
- $e$ only

No, the answer is incorrect.
Score: 0
Accepted Answers:
$a_1$ and $a_2$

6) For a trigonal bipyramidal complex, the equatorial bonds involve orbitals of symmetries
- $a_1$ and $e$
- $a_2$ and $e$
- $2a_1 + a_2$
- $a_1 + 2a_2$

No, the answer is incorrect.
Score: 0
Accepted Answers:
$a_1$ and $e$