

## Unit 5 - Week 3

## Assignment 3

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

**Due on 2019-08-21, 23:59 IST.**

1) 1 point

Predict the coordination number and oxidation state of platinum in diamminedichloroplatinum

- A. 2, +2  
B. 4, +4  
C. 6, +2  
D. 4, +2

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

D.

2) 1 point

Like  $[\text{Ag}(\text{NH}_3)_2]^+$ , the complex  $[\text{Ag}(\text{NH}_2\text{CH}_2\text{CH}_2\text{NH}_2)]^+$  is not formed because

- A.  $\text{Ag}^+$  doesnot react with ethylene diamine (en) ligand  
B. the charge density is too low to bind with a bidentate ligand  
C. ethylenediammine cannot expand its bite angle to  $180^\circ$  to form a linear complex  
D. in presence of bidentate ligand  $\text{Ag}^+$  extends its coordination number to form  $[\text{Ag}(\text{en})_3]^+$

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

C.

3) 1 point

In  $\text{ClF}_3$  complex the angles between  $\text{F}-\text{Cl}-\text{F}$  is/are nearly

- A.  $120^\circ$   
B.  $180^\circ, 90^\circ$   
C.  $105^\circ$   
D.  $120^\circ, 60^\circ$

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

B.

4) 1 point

The no of denticity for the ligand triazene and acetate are

- A. 2, 2  
B. 3, 2  
C. 3, 1  
D. 3, 3

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

A.

5) 1 point

The geometry of the complexes  $[\text{Ni}(\text{CO})_4]$  and  $[\text{Co}(\text{NCS})_4]^{2-}$  are

- A. square planar, tetrahedral  
B. tetrahedral, square planar  
C. tetrahedral, T-shaped  
D. both are tetrahedral

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

D.

6) 1 point

If a complex  $\text{NiX}_2\text{Y}_2$  has a triplet spin state, what will be the geometry of the complex?

- A. square planar  
B. square pyramidal  
C. tetrahedral  
D. seesaw

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

C.

7) 1 point

Which of the following is known as Wilkinson's catalyst

- A. chloridotris(triphenylphosphine)rhodium(I)  
B. chloridotris(triphenylphosphine)palladium(I)  
C. dicarbonyldiiodorhodium(I)  
D. tetrakis(triphenylphosphine)palladium(0)

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

A.

8) 1 point

What is the coordination geometry of  $\text{Ni}(\text{CN})_2(\text{PPh}(\text{OEt})_2)_3$

- A. Square pyramid  
B. Trigonal bipyramid  
C. Octahedral  
D. Tetrahedral

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

B.

9) 1 point

The symmetry of tetragonal distortion is

- A.  $\text{O}_h$   
B.  $\text{D}_{2h}$   
C.  $\text{D}_{4h}$   
D.  $\text{T}_d$

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

C.

10) 1 point

In Berry pseudorotation of  $\text{Fe}(\text{CO})_5$  the intermediate geometry is

- A. TBP  
B. Tetrahedral  
C. Square Planar  
D. Square Pyramidal

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

D.

11) 1 point

Which of the following geometry is not possible for seven coordination number?

- A. Pentagonal bipyramid  
B. Capped trigonal prism  
C. Square antiprism  
D. Capped octahedron

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

C.

12) 1 point

The geometry of complexes  $[\text{W}(\text{CO})_4\text{Br}_3]^-$  and  $[\text{Zr}(\text{ox})_4]$  are

- A. Capped octahedron, square antiprism  
B. Capped trigonal prism, dodecahedron  
C. Pentagonal bipyramid, hexagonal bipyramid  
D. Pentagonal bipyramid, cube

- A.  
 B.  
 C.  
 D.

No, the answer is incorrect.

Score: 0

Accepted Answers:

A.

Course outline

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Week 2

Week 3

Lecture 7 : Coordination Number- I

Lecture 8 : Coordination Number- II

Lecture 9 : Coordination Number- III

Lecture 10 : Coordination Number- IV

Quiz : Assignment 3

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Assignment Solution