QUIZIZZ Worksheets

Name

Exploring Coordination Compounds

Class

Total questions: 15

Worksheet time: 8mins

Date

Instructor name: Dr. Ramanathan Saitechinfo

1. What is the IUPAC name for the complex [Cu(NH3)4]SO4?

a) copper(II) ammine sulfate

b) tetraamminecopper(I) sulfate

c) copper(II) sulfate

d) tetraamminecopper(II) sulfate

2. Identify the oxidation state of copper in [CuCl4]2-.

a) +2

b) +3

c) +1

d) 0

3. What type of ligand is ethylenediamine (en)?

a) Monodentate ligand

b) Bidentate ligand

c) Tridentate ligand

d) Polydentate ligand

4. Provide the molecular formula for the complex [Fe(CN)6]3-.

a) FeC5N6

b) FeC6N6

c) FeC4N6

d) FeC6N5

5. What is the IUPAC name for [Co(NH3)5Cl]Cl2?

a) hexamminecobalt(III) chloride

b) tetraamminecobalt(II) chloride

c) pentaamminecobalt(II) chloride

d) pentaamminechlorocobalt(III) chloride

6. How do you determine the oxidation state of the central metal in a coordination compound?

a) The oxidation state is always zero for the central metal.
b) The oxidation state is determined by the number of ligands attached.
c) The oxidation state is calculated by adding the charges of the ligands to the overall charge.
d) The oxidation state of the central metal is calculated by subtracting the sum of the charges of the ligands from the overall charge of the complex.

7. List two examples of bidentate ligands.

a) Carbonate
b) Chloride
c) Ethylenediamine, Oxalate
d) Acetate

8. What is the IUPAC name for the complex [Ag(NH3)2]NO3?

a) silver(II) nitrate
b) monoammine silver(I) nitrate
c) diammine silver(I) nitrate
d) diammine silver(II) nitrate

9. Identify the type of ligand in [Ni(CO)4].

a) CO is a strong field ligand.
b) CO is a bridging ligand.
c) CO acts as a bidentate ligand.
d) CO is a weak field ligand.

10. What is the molecular formula for the complex [Cr(H2O)6]Cl3?

a) CrH12Cl3O6
b) CrH12Cl4O6
c) CrH12Cl2O5
d) CrH10Cl3O6

11. What is the IUPAC name for [PtCl2(NH3)2]?

a) dichloroplatinum(II)
b) chloroplatinum(IV)
c) diamminedichloroplatinum(II)
d) tetraammineplatinum(II)

12. How many coordination sites does a hexadentate ligand occupy?

a) 8
b) 4
c) 2
d) 6

13. What is the oxidation state of iron in [Fe(C2O4)3]3-?

a) +2
b) +3
c) +1
d) 0

14. Name a common monodentate ligand.

a) Carbon monoxide (CO)
b) Ammonia (NH3)
c) Water (H2O)
d) Chloride (Cl-)

15. What is the IUPAC name for the complex [Mn(H2O)6]2+?

a) hexachloromanganese(II)
b) hexaaquamanganese(II)
c) tetraaquamanganese(II)
d) manganese(II) sulfate

Answer Keys

1. d) tetraamminecopper(II) sulfate
2. a) +2
3. b) Bidentate ligand
4. b) FeC6N6
5. d) pentaamminechlorocobalt(III) chloride
6. d) The oxidation state of the central metal is calculated by subtracting the sum of the charges of the ligands from the overall charge of the complex.
7. c) Ethylenediamine, Oxalate
8. c) diammine silver(I) nitrate
9. a) CO is a strong field ligand.
10. a) CrH12Cl3O6
11. c) diamminedichloroplatinum(II)
12. d) 6
13. b) +3
14. c) Water (H2O)
15. b) hexaaquamanganese(II)