

Key

CEM143, Quiz 1, Summer 2019 (26 Points)

PID:

Name (Print):

1) (2 pts) How many valence electrons does Germanium (Ge) have?

4

2) (2 pts) What is the valence of Nitrogen (N)?

3

3) (6 pts) Place a circle around the more electronegative element in each of the following pairs.

a) As or **Se**

b) Ga or **Ge**

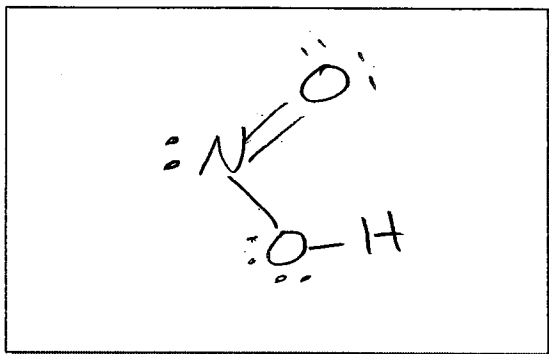
c) **C** or Si

4) (6 pts) Draw a Lewis dot formula for the following compounds.

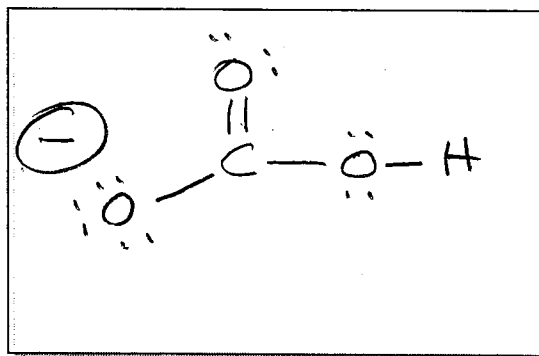
1 + 5 + 12

18

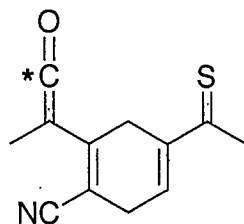
A)  $\text{HNO}_2$



B)  $\text{HCO}_3^-$



5) (10 pts, 2 pts. each) Answer the following questions about **Molecule A**.



**Molecule A**

A) What is the hybridization of Sulfur in **Molecule A**?

$sp^2$

B) What is the hybridization of Oxygen in **Molecule A**?

$sp^2$

C) What is the hybridization of Nitrogen in **Molecule A**?

$sp$

D) What is the hybridization of the carbon marked with a "\*" in **Molecule A**?

$sp$

E) How many pi-electrons are there in **Molecule A**?

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