Quiz VI 8 am class Dr. Hahn General Chemistry I 11/11/11 F Form A Quiz # 5-3

Name Key print Name (actually 11/14/11 M sign because of security threat

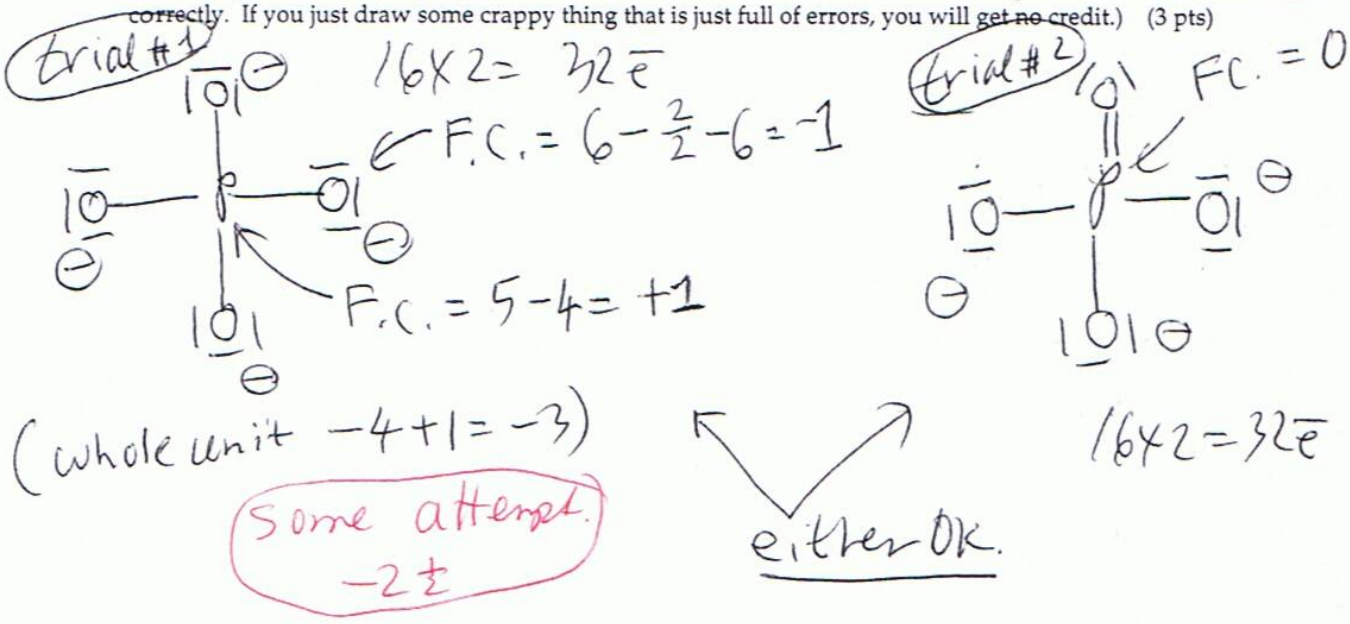
For long answer type questions, you must show all work for partial credit. Please write legibly. (I cannot grade what I cannot read.) Please print your name on the **top back** of the quiz so that I can return the quiz in a self serve fashion. (1 pts. for writing name on the back & front)

Long Answer. Write your answer in the space provided. Please show work for full credit and to receive partial credit for incorrect final answers. (write legibly please)

1) a. What is the number of valence electrons in the given molecule? 32 (3 pts) (left off -½)

PO_4^{-3} $(5) + 4(6) + 3 = 32\bar{e}$ (charge) (NO work -½)

b. Draw the Lewis Dot structure. (You will get almost full credit if you show a valid trial Lewis Dot structure on the way to the final correct Lewis Dot structure. I have the atoms in the correct position - connect the atoms correctly. If you just draw some crappy thing that is just full of errors, you will get no credit.) (3 pts)



2) Show electron configuration for As

a. Show the complete electron configuration in the format ($1s^2$, $2s^2$....etc) (2 pts)

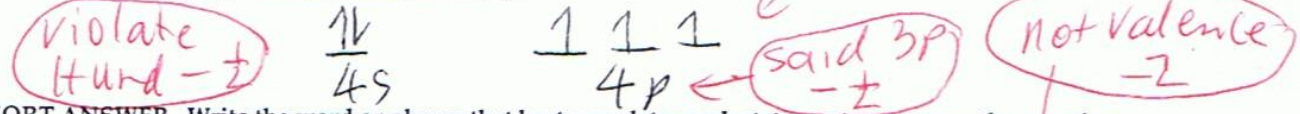
$1s^2, 2s^2, 2p^6, 3s^2, 3p^6, 4s^2, 3d^{10}, 4p^3$ or $[Ar]\ 4s^2, 3d^{10} 4p^3$

b. Show the valence electron configuration for the above. (2 pts)

$4s^2, 4p^3$ (not valence -1)

c. Show the valence electron configuration orbital diagram in the format (2 pts)

↿⇂ (3s) 1 ___ ___ (3p)



SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

3) How many valence electrons in the atom S (4 pts) S in group 6 3) 6

Gp # = # valence ē (in s+p block elements)

4) Draw the Lewis Dot symbol for the atom F (4 pts) 4) 

s+p block element ∠D symbol - (dots = # valence e)

Quiz VI 8 am class Dr. Hahn General Chemistry I 11/11/11 F (actually 11/14/11 security threat) Form B Quiz # 6-4

Name Key print Name _____ sign _____

For long answer type questions, you must show all work for partial credit. Please write legibly. (I cannot grade what I cannot read.) Please print your name on the **top back** of the quiz so that I can return the quiz in a self serve fashion. (1 pts. for writing name on the back & front)

Long Answer. Write your answer in the space provided. Please show work for full credit and to receive partial credit for incorrect final answers. (write legibly please)

1) a. What is the number of valence electrons in the given molecule? 24 (3 pts) (left off -½)

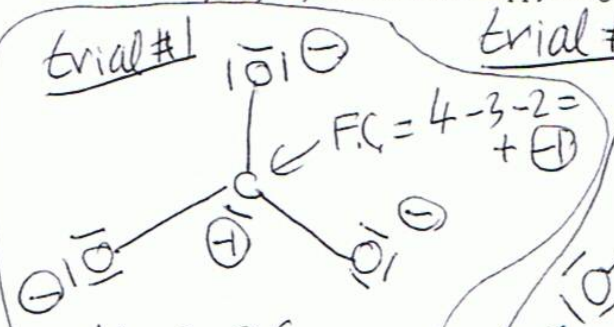
CO_3^{-2}

C O (large)

$4 + 3(6) + 2 = 24$ (no work -½)

b. Draw the Lewis Dot structure. (You will get almost full credit if you show a valid trial Lewis Dot structure on the way to the final correct Lewis Dot structure. I have the atoms in the correct position - connect the atoms correctly. If you just draw some crappy thing that is just full of errors, you will get no credit.) (3 pts)

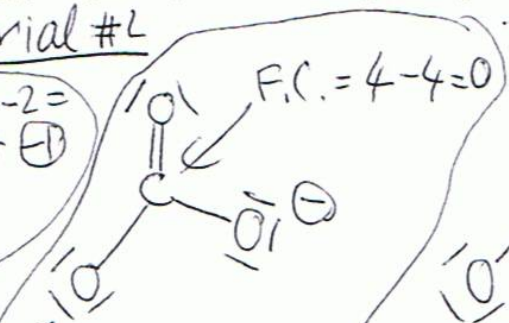
trial #1



$13 \times 2 = 26$ too many $\bar{e}$

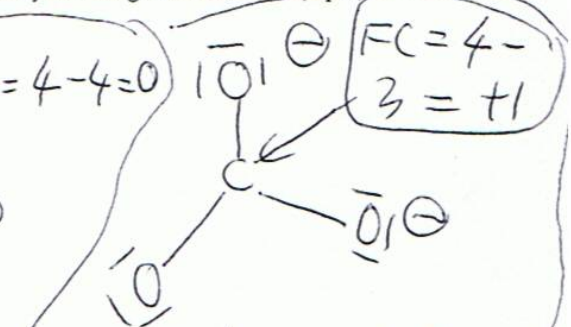
not valid too many $\bar{e}$

trial #2



$12 \times 2 = 24$ due

$F.C. = 6 - 1 - 6 = -1$ best



$12 \times 2 = 24\bar{e}$

some attempt -2½

2) Show electron configuration for Ge

a. Show the complete electron configuration in the format ($1s^2$, $2s^2$....etc) (2 pts)

$1s^2; 2s^2; 2p^6; 3s^2; 3p^6; 4s^2; 3d^{10}; 4p^2$ or $[Ar]\ 4s^2; 3d^{10}; 4p^2$

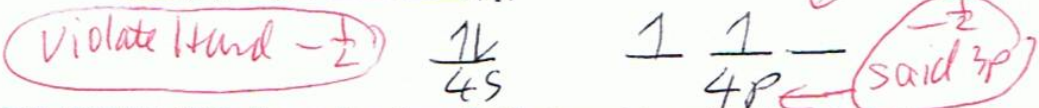
b. Show the valence electron configuration for the above. (2 pts)

$4s^2; 4p^2$ (not valence -1)

c. Show the valence electron configuration orbital diagram in the format (2 pts)

1↓ (3s) 1 ___ ___ (3p)

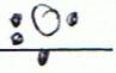
(violate Hund -½)



SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

3) How many valence electrons in the atom Cl (4 pts) Cl in group 7 3) 7

Gp # = # valence $\bar{e}$ (in S + P block elements)

4) Draw the Lewis Dot symbol for the atom O (4 pts) 4) 

S + P block elements LD symbol - (dot = # valence e)

Quiz VI 9 am class Dr. Hahn General Chemistry I 11/11/11 E Form A Quiz # 7-2

actually 11/14/11 because of

Name Key print Name Security Threat sign

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Long Answer. Write your answer in the space provided. Please show work for full credit and to receive partial credit for incorrect final answers. (write legibly please)

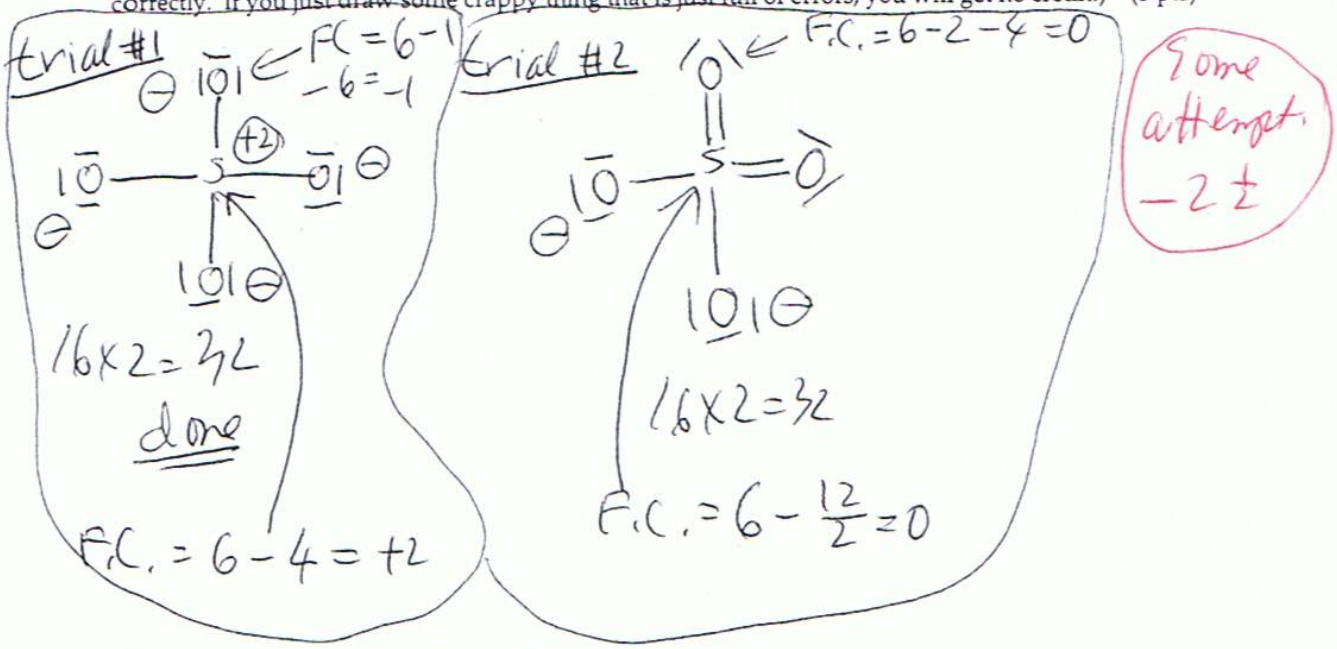
left off -½

1) a. What is the number of valence electrons in the given molecule? 32 (3 pts)

SO_4^{-2} $6 + 4(6) + 2 = 32\bar{e}$ (2 charge)

no work -½

b. Draw the Lewis Dot structure. (You will get almost full credit if you show a valid trial Lewis Dot structure on the way to the final correct Lewis Dot structure. I have the atoms in the correct position – connect the atoms correctly. If you just draw some crappy thing that is just full of errors, you will get no credit.) (3 pts)



some attempt -2±

2) Show electron configuration for Br

a. Show the complete electron configuration in the format ($1s^2$, $2s^2$....etc) (2 pts)

$1s^2; 2s^2, 2p^6, 3s^2, 3p^6, 4s^2, 3d^{10}, 4p^5$ or $[Ar]\ 4s^2, 3d^{10}, 4p^5$

b. Show the valence electron configuration for the above. (2 pts)

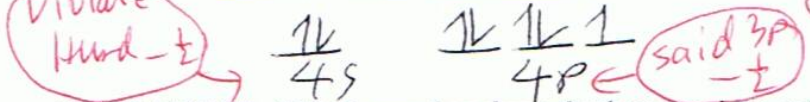
$4s^2, 4p^5$ for main group elements valence is only s+p

c. Show the valence electron configuration orbital diagram in the format (2 pts)

not valence -1

1↓ (3s) 1 ___ ___ (3p)

Violate Hund -½



said 3p -½

not valence -2

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

3) How many valence electrons in the atom Si (4 pts) Si group 4

for s+p block elements Gp # = # valence ē 3) 4

4) Draw the Lewis Dot symbol for the atom N (4 pts) 4) ·N·

s+p block elements ∠D symbol – (dot = # valence ē)

Quiz VI 9 am class Dr. Hahn General Chemistry I 11/11/11 F Form B Quiz # 8-1

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Name Key print Name sign

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Long Answer. Write your answer in the space provided. Please show work for full credit and to receive partial credit for incorrect final answers. (write legibly please)

left off -1

1) a. What is the number of valence electrons in the given molecule? 24 (3 pts)

NO_3^- N: 5 + 3(6) + charge 1 = 24 $\bar{e}$

no work -1

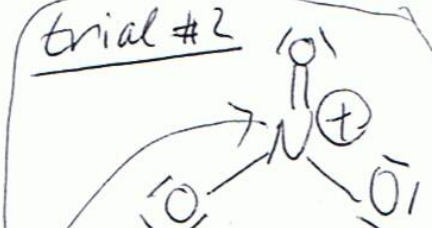
b. Draw the Lewis Dot structure. (You will get almost full credit if you show a valid trial Lewis Dot structure on the way to the final correct Lewis Dot structure. I have the atoms in the correct position - connect the atoms correctly. If you just draw some crappy thing that is just full of errors, you will get no credit.) (3 pts)

trial #1

13 x 2 = 26

too many $\bar{e}$

trial #2



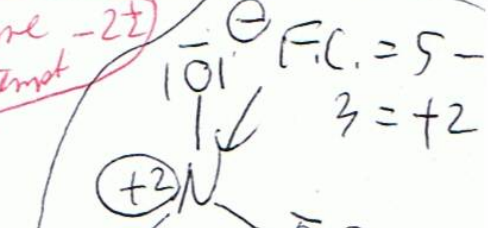
12 x 2 = 24

done

F.C. = 6 - 1 - 6 = -1

F.C. = 5 - 4 = +1

some -2 attempt



F.C. = 5 - 3 = +2

12 x 2 = 24

N does not have octet

not valid structure

2) Show electron configuration for Se

a. Show the complete electron configuration in the format ($1s^2$, $2s^2$ ...etc) (2 pts)

$1s^2, 2s^2, 2p^6, 3s^2, 3p^6, 4s^2, 3d^{10}, 4p^4$ or $[Ar]\ 4s^2\ 3d^{10}\ 4p^4$

b. Show the valence electron configuration for the above. (2 pts)

$4s^2, 4p^4$ for main group elements - valence is only s+p electrons

c. Show the valence electron configuration orbital diagram in the format (2 pts)

1↓ (3s) 1 ___ ___ ___ (3p)

violate Hund -1

1↓ / 4s 1↓ 1 1 / 4p

said 3p -1

not valence -1

not valence -2

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

3) How many valence electrons in the atom P (4 pts)

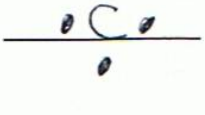
P - group 5 → for s+p block elements Gp# = # valence $\bar{e}$

3) 5

4) Draw the Lewis Dot symbol for the atom C (4 pts)

s+p block elements LD symbol

dot = # valence $\bar{e}$

4) 

Quiz VI 8 am class Dr. Hahn General Chemistry I 11/11/11 F Form A Quiz # _____

Name_____print Name _____sign_

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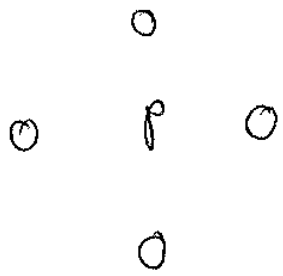
Long Answer. Write your answer in the space provided. Please show work for full credit and to receive partial credit for incorrect final answers. (write legibly please)

1) a. What is the number of valence electrons in the given molecule? _____ (3 pts)

PO_4^{-3}

b. Draw the Lewis Dot structure. (You will get almost full credit if you show a valid trial Lewis Dot structure on the way to the final correct Lewis Dot structure. I have the atoms in the correct position - connect the atoms correctly. If you just draw some crappy thing that is just full of errors, you will get no credit.) (3 pts)



2) Show electron configuration for As

a. Show the complete electron configuration in the format ($1s^2$, $2s^2$....etc) (2 pts)

b. Show the valence electron configuration for the above. (2 pts)

c. Show the valence electron configuration orbital diagram in the format (2 pts)

__↿↾__ (3s) __↿__ ____ ____ (3p)

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

3) How many valence electrons in the atom S (4 pts) 3) _____

4) Draw the Lewis Dot symbol for the atom F (4 pts) 4) _____

Quiz VI 8 am class Dr. Hahn General Chemistry I 11/11/11 F Form B Quiz # 2-1

Name_____print Name _____sign_

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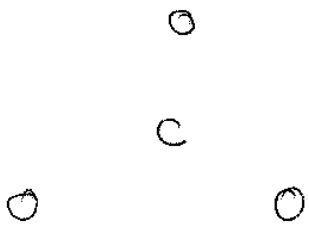
Long Answer. Write your answer in the space provided. Please show work for full credit and to receive partial credit for incorrect final answers. (write legibly please)

1) a. What is the number of valence electrons in the given molecule? _____ (3 pts)

CO_3^{-2}

b. Draw the Lewis Dot structure. (You will get almost full credit if you show a valid trial Lewis Dot structure on the way to the final correct Lewis Dot structure. I have the atoms in the correct position – connect the atoms correctly. If you just draw some crappy thing that is just full of errors, you will get no credit.) (3 pts)



2) Show electron configuration for Ge

a. Show the complete electron configuration in the format ($1s^2$, $2s^2$....etc) (2 pts)

b. Show the valence electron configuration for the above. (2 pts)

c. Show the valence electron configuration orbital diagram in the format (2 pts)

__↿⇂__ (3s) __↿__ ____ ____ (3p)

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

3) How many valence electrons in the atom Cl (4 pts) 3) _____

4) Draw the Lewis Dot symbol for the atom O (4 pts) 4) _____

Quiz VI 9 am class Dr. Hahn General Chemistry I 11/11/11 F Form A Quiz # 11-1

Name_____print Name _____sign_

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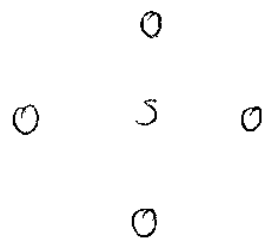
Long Answer. Write your answer in the space provided. Please show work for full credit and to receive partial credit for incorrect final answers. (write legibly please)

1) a. What is the number of valence electrons in the given molecule? _____ (3 pts)

SO_4^{-2}

b. Draw the Lewis Dot structure. (You will get almost full credit if you show a valid trial Lewis Dot structure on the way to the final correct Lewis Dot structure. I have the atoms in the correct position – connect the atoms correctly. If you just draw some crappy thing that is just full of errors, you will get no credit.) (3 pts)



2) Show electron configuration for Br

a. Show the complete electron configuration in the format ($1s^2$, $2s^2$....etc) (2 pts)

b. Show the valence electron configuration for the above. (2 pts)

c. Show the valence electron configuration orbital diagram in the format (2 pts)

__↿⇂__ (3s) __↿__ ____ ____ (3p)

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

3) How many valence electrons in the atom Si (4 pts) 3) _____

4) Draw the Lewis Dot symbol for the atom N (4 pts) 4) _____

Quiz VI 9 am class Dr. Hahn General Chemistry I 11/11/11 F Form B Quiz # 6-3

Name_____print Name _____sign_

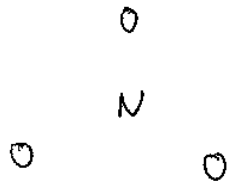
For long answer type questions, you must show all work for partial credit. Please write legibly. (I cannot grade what I cannot read.) Please print your name on the **top back** of the quiz so that I can return the quiz in a self serve fashion. (1 pts. for writing name on the back & front)

Long Answer. Write your answer in the space provided. Please show work for full credit and to receive partial credit for incorrect final answers. (write legibly please)

1) a. What is the number of valence electrons in the given molecule? _____ (3 pts)

NO_3^-

b. Draw the Lewis Dot structure. (You will get almost full credit if you show a valid trial Lewis Dot structure on the way to the final correct Lewis Dot structure. I have the atoms in the correct position - connect the atoms correctly. If you just draw some crappy thing that is just full of errors, you will get no credit.) (3 pts)



2) Show electron configuration for Se

a. Show the complete electron configuration in the format ($1s^2$, $2s^2$....etc) (2 pts)

b. Show the valence electron configuration for the above. (2 pts)

c. Show the valence electron configuration orbital diagram in the format (2 pts)

1V (3s) 1 ____ ____ (3p)

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

3) How many valence electrons in the atom P (4 pts) 3) _____

4) Draw the Lewis Dot symbol for the atom C (4 pts) 4) _____