

2005 CLEARVIEW, OHIO, INVITATIONAL

RESPONSE SHEET

SCHOOL NAME _____ **TEAM NUMBER** _____

PARTICIPANT NAMES: _____ **&** _____

PART I: MULTIPLE CHOICE QUESTIONS:

1. _____ 5. _____ 9. _____ 13. _____ 17. _____

2. _____ 6. _____ 10. _____ 14. _____ 18. _____

3. _____ 7. _____ 11. _____ 15. _____ 19. _____

4. _____ 8. _____ 12. _____ 16. _____ 20. _____

PART II: LAB SIMULATION #1: COPPER RECYCLING!

Q 1. _____

Q 2. _____

Q 3.

Q 4.

Q 5.

Q 6.

Q 7: _____

Q 8: _____

Q.9:

Q.10:

Q.11:

Q. 12:

PART III: MOLECULAR MODEL PROBLEM #1

1. DRAW YOUR MOLECULE HERE --->

2. _____ 5. _____

3. _____ 6. _____

4. _____ 7. _____

PART IV: MOLECULAR MODELING PROBLEM #2

Consider the fulminate ion, CNO^{-1} (listed in order they are bonded to each other).

1. Draw the Lewis Dot structure for this ion and show any resonance if it exists.

2. Give the hybridization of the central atom (N) _____

PART V: OXIDATION NUMBERS:

1. _____ 2. _____ 3. _____ 4. _____ 5. _____

PART VI: CHEMICAL CELLS

1. Write a balanced net ionic equation for the spontaneous reaction that occurs as the cell operates.

2. What is the oxidizing agent? _____

3. What is the reducing agent? _____

4. What metal acts as the cathode? _____

5. What additional component is necessary to make the cell operate?

6. What is the cell voltage produced? _____

7. _____(multiple choice answer)

PART VII: FUEL CELLS

1. _____ 2. _____ 3. _____ 4. _____