Exam 3 Vocab

Oxidation	Electromotive Force	Anode	Cathode	1st Law of Thermodynamics
Reduction	Battery	Electrolysis	Entropy	Irreversible Process
Enthalpy	2nd Law of Thermodynamics	Gibb's Free Energy	3rd Law of Thermodynamics	Spontaneous Process
Reversible Process	Primary Battery	Secondary Battery	Voltaic Cell	

1. States that in any spontaneous process there is an increase in the entropy of the universe: _____

2. Occurs when a species gains electrons: _____

3. A thermodynamic quantity equal to the enthalpy (of a system or process) minus the product of the entropy and the absolute temperature: _____

4. The potential difference between the anode and the cathode in a cell; also called the cell potential: _____

5. States that the entropy of a perfect crystal at 0 K is 0: _____

6. The place where reduction occurs: _____

7. A portable, self-contained, electrochemical power source that consists of one or more voltaic cells: _____

8. Law of conservation of energy: _____

9. The system must take another path to return to original state; cannot simply go in the reverse direction: _____

10. The measure of the disorder in a system: _____

11. Change to a system is made in such a way that the system can be restored to original state by exactly reversing the change _____

12. A process that occurs without any outside intervention; goes only in the indicated direction: _____

13. Heat absorbed by a system during a constant pressure process: _____

14. An electrochemical cell in which an electric current is gained from spontaneous redox reactions: _____

15. Use of electrical energy to create chemical reactions: _____

16. A battery that can be recharged: _____

17. Occurs when a species loses its electrons: _____

18. A battery than cannot be recharged when “dead”: _____

19. The place where oxidation occurs: _____

Greenhouse Gas	Positron	Gamma Emission	Beta Decay	Alpha Decay
Half-Life	Electron Capture	Troposphere	Radioactive	Nuclear Transmutations
Activity	Radionuclide	Nitrogen	Stratosphere	Belt of Stability

1. The rate at which a sample decays: _____

2. The time required for half of a radionuclide sample to decay: _____

3. When an electron from the surrounding electron cloud is absorbed into the nucleus: _____

4. The most abundant element in the atmosphere: _____

5. The loss of an alpha particle: _____

6. The layer of the atmosphere in which weather occurs: _____

7. Can be induced by causing a particle to collide with a nucleus: _____

8. Shows what nuclides are stable: _____

9. The loss of a y-ray, which is high-energy radiation that almost always accompanies the loss of a nuclear particle: _____

10. The layer of the atmosphere in which the ozone layer is located: _____

11. Nuclei that change spontaneously and are radioactive are referred to as: _____

12. The loss of a beta particle: _____

13. A particle that has the same mass as, but an opposite charge to that of an electron: _____

14. Trap heat attempting to escape the atmosphere: _____

15. A descriptive term for nuclei that change spontaneously and emit radiation: _____