***Exam Review 3 Correction***

1. Each organism is assigned a universally accepted name in order to facilitate communication among scientists. The name doesn’t change from language to language so there’s less confusion, and the name often incorporates some descriptive feature of the organism to help identify it.
2. An organisms scientific name is derived from the name of GENUS and the name of SPECIES groups it belongs to.
3. Carolus Linneaus’ classification system classified organisms based on their physical characteristics instead of on their living space. This provides a better foundation for identifying relationships among organisms. The system is also flexible enough to allow for new groups to be created, groups to be split or groups to be combined, should the need arise. This way, when new organisms are discovered and don’t fit anywhere in the system, the system can be altered accordingly to place them.
4. Kindgom Eubacteria: Unicellular prokaryotes with peptydoglycan

Kingdom Archaebacteria: Unicellular prokaryotes **without**  peptydoglycan

Kingdom Protista: Eukaryotes who don’t have the characteristcs necessary to be Fungi, Plants or Animals.

Kingdom Fungi: Heterotrophic eukaryotes with chitin in their cell walls that grow using hyphae and reproduce using spores.

Kingdom Plantae: autotrophic multicellular eukaryotes with cellulose in their cell walls and who are non-motile.

Kingdom Animalia: heterotrophic multicellular eukaryotes that are motile for at least part of their life.

1. Viruses are non-living structures made up solely of a protein coat surrounding a piece of genetic material (DNA). They cannot reproduce on their own and depend on a host cell to replicate them. Viruses do not eat or use energy.

Bacteria are living unicellular organisms with regular cell structures (cytoplasm, mitochondria, etc…). Bacteria have all the characteristics of life, and therefore reproduce normally, and consume food or produce it through photosynthesis.

1. A virus will replicate by first invading a host cell. The viral DNA will then hide in the cell’s DNA, and force the cell to make extra copies of the virus itself, eventually breaking out of the cell and starting the cycle over again.
2. Anitibiotics, as their name suggests, work only on living cells. They are toxic and kill living cells, such as bacteria. Viruses have no cells and are not alive so antibiotics have no effect on them.
3. Bacteria can be classified by any number of characteristics, including:

* Shape (Cocci, Baccilli, Spirilla)
* Presence or absence of peptidoglycan (gram-positive vs. gram negative)
* Method of movement (cilia, flagella, slime trail, etc…)
* Reproductive strategies (binary fission, endospores, etc…)

1. Animal-like protists are classified according to how they move:

* Zooflagellates move using flagella (long, whip-like structures that exist in small numbers)
* Ciliates move using cilia (short, hair-like structures that exist in high number)
* Sarcodines move using pseudopods (cytoplasmic extensions of the cell membrane)
* Sporozoans don’t have any structures used for movement and rely instead on the environment.

1. Slime molds are fungi-like protists. They belong to kingdom Protista.
2. Plant-like protists are classified first by their number of cells, and then by the colour of pigments that they contain.

Unicellular Plant-like Protists:

Fire Algae: Red pigment

Euglenoids: Green pigment

Golden-Brown Algae: Brown and Yellow pigments

Multicellular Plant-Like Protists:

Green algae: green pigment

Red Algae: red pigment

Brown Algae: brown pigments