Quiz #2 Key – 1:00 lab

1. Define:

Osmosis – Osmosis can be defined as the movement of solvent (usually water) from an area of low solute concentration to an area of higher solute concentration across a semi-permeable membrane (one permeable to the solvent but not to the solute). Unlike diffusion, osmosis requires a membrane.

Negative geotaxis – Negative geotaxis is the directed movement of organisms away from the gravitational pull of the earth. Cells swimming upward, away from the bottom of a pond would be displaying negative geotaxis, as would plant shoots growing upward and away from the soil surface.

Endoplasmic reticulum – The endoplasmic reticulum is an organelle appearing as folded sheets of double-layered membranes, and is involved in storage, transport and lipid synthesis. In some regions the endoplasmic reticulum is smooth, and in other regions it is coated with ribosomes (granular bodies composed of RNA and protein). When ribosomes are present, the endoplasmic reticulum is rough and is involved in protein synthesis.

2. Nucleotides/ Nucleotides can have additional phosphate groups bound to them, and will form high-energy compounds called nucleoside triphosphates (r-NTPs or d-NTPs). Nucleotides can be used to form coenzymes including NAD, FAD and NADP, and cyclic nucleotides can be used as regulatory molecules (c-AMP, c-GMP, etc.).

3. Amphipathic or amphiphilic/ hydrophilic

4. Integral proteins or intrinsic proteins/ facilitated diffusion

5. Water will flow into the cell.

6. Opposite

7. Phagocytosis

8. Quorum sensing

9. Golgi apparatus

10. Ribosomes

11. Lysosomes/ contractile vacuoles

12. Mitochondria/ chloroplasts/ both contain ccc-DNA molecules and 70S ribosomes.

The most common etiological agents of toxic shock syndrome are identified as *Staphylococcus aureus*.