BIO 101 Sample Questions

1a. Enumerate the major Kingdoms of organisms.

b. Discuss how Bacteria are classified.

c. Define the following conditions:

i) Obligate aerobes ii) Obligate anaerobes iii) Facultative anaerobes

2a. Write short notes on the following:

1. Classification of Fungi ii) Domain Archaea

b. What is asexual reproduction?

c. List six (6) examples of asexual reproduction as discussed in class.

3a. Describe the structure, composition and function of prokaryotic cell membrane with diagrams.

b. List the components of the mitochondrion.

c. What are the similarities and differences between flagellum and cilium.

4a. Draw a well labeled bacterium cell and discuss any three (3) organelles labeled.

b. Differentiate a prokaryotic cell and eukaryotic cell in terms of extracellular structures.

c. State the chemical composition of the cell wall of the following organisms:

i) Bacterium

ii) Algae

1. Fungi

5. Name the spore cases of these fungi:-

i) Ascomycota – the spore case is ………………………..….…………….

ii) Basidiomycota – the spore case is …………………………..….………

iii) Zygomycota – the spore case is …………………………………..…...

iv) Deuteromycota – the spore case is ……………………………............

6. In one sentence only, define the following:-

1. Autotrophs –
2. Heterotrophs –
3. Saprophytes –

7. (a) Archaeans can be referred to as “life extremists,” how is this true of the following?

1. Methanogens
2. Halophiles
3. Thermophiles

(b) Mention the seven major levels of classification of organisms in the right order?

8. (a) Describe what Binomial Nomenclature is.

(b) State the four divisions of Fungi and give a brief description of each.