Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_ Mods: \_\_\_

**Biology Quiz 5: TAKE HOME QUIZ *MAKE UP* (22 points) MU**

Read everything carefully and choose the best possible answer for each question.

**TRUE/FALSE:**

1. All cells have some common parts (structure in common) such as the plasma membrane, cytoplasm, ribosomes and DNA.
2. The shape and size of a cell influences its function
3. Water makes up most of the cytoplasm/cytosol.
4. Bacterial cells are completely different (in every way) than human cells.
5. Cells can have different shapes and functions.
6. Unicellular organisms, like bacteria and protists, consist of various cells specialized in their structure to accomplish various functions

**Short Answer: Write the correct answer on the line provided or answer the multiple choice question by choosing the letter that represents the best answer.**

1. Substances that enter or leave any cell must pass through which structure?
2. All cells store their information/data in the form of this macromolecule
3. Ribosomes are necessary because they do what function?
4. The **structures** a cell possesses are linked to its
5. Information/Instructions for building necessary proteins is stored in this macromolecule
6. A multicellular organism would be composed of what type (classification) of cells?
7. Which type of cell (classification) has been around the longest and is the most common today?
8. Prokaryotic cells are significantly less complex than their eukaryotic counterparts. Name at least one organelle they have in common.

\_\_\_\_\_\_\_ 15. When first locating a specimen using a light microscope, you should always start with which objective?

1. lowest power
2. highest power
3. it depends on what you are looking at

\_\_\_\_\_\_ 16. When viewing specimens through the light microscope, the greatest field of view (area) can be seen at which of the following available magnifications

1. 4X C. 40X
2. 10X D. 400X

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 17. When using a compound light microscope, you adjust the amount of light you are passing through your specimen with which part of the microscope?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 18. When using a compound light microscope, you can adjust the magnification level. To increase the magnification level you must adjust which part of the microscope?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 19. When using a compound light microscope, the slide will rest on this part of the microscope (which also houses the stage opening)

\_\_\_\_\_\_ 20. Which microscope do you think it most appropriate to use to view an entire specimen that is 5mm long (HINT: can you see 5mm with the naked eye?).

1. Electron B. Light

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 21. I calculated the field-of-view (FOV) for my light microscope to have a diameter of 4mm at 40X total magnification. Given that information, estimate the length of the specimen in my field of view below?

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| --- | --- |
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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 22. When viewing specimens through the light microscope, using the 10X objective will result in a total magnification of