BIOL 1202 Fall 2019 **REVIEW SHEET for EXAM 3 covering CH 28-32**

A. These are the items to focus on in addition to using your LECTURE NOTES as a study tool.
B. You should also take the "Practice EXAM 2 on CH 28-32" on MOODLE to assess how well you know the material before taking the EXAM on Tuesday 11/12/2019.
C. If you are not taking the practice exam on MOODLE, you are not preparing properly for the exam.
D. You can generate a PLETHORA of review questions using Mastering Biology. Use this LINK for a step-by-step review on how to accomplish this.

CH 29: PROTISTS

1. Diseases or conditions caused by microorgamisms
    a. You should be able to match protist groups with diseases/conditions they cause or why they would be ecologically important
2. Understand how protists use different nutritional modes and ow each one differs from each other
    a. Photoautotrophs
    b. Heterotrophs
    c. Mixotrophs
3. What are the 4 supergroups of Eukaryotes and how do they differ from each other?
4. What does the term "endosymbiosis" refer to and how is that process important from an evolution perspective?
5. What are some examples of commercially important protists? (i.e. red, brown, and green algaes)
6. How do foram and radiolarian shells differ from each other?

CH 31: FUNGI

1. Understand the difference between Decomposers, Parasites, and Mutualists in the fungi.
    a. How do they use these lifestyles to their advatage?
    b. What is the food SOURCE for each of these lifestyles?
    c. Do they use any unusual structures or modifications in body form for these different lifestyles?
2. What is the structure of a fungus and how are they different from other multicellular organisms?
3. What is a mycorrhizae fungus and how is it unusual?
4. What is the difference between PLASMOGAMY and KARYOGAMY in the fungi?
    a. How does this relate to their reproduction?
    b. What mode of reproduction do fungi use?
    c. Is one form of reproduction better than another in fungi?
5. What group are fungi most closely related to and where do they make an appearance in terms of evolution?
6. What are the major groups of fungi? Which group ha the most described number of species? What is unusual about each group? Be able to give an example from each group.
    a. Chytrids
    b. Zygomycetes
    c. Glomeromycetes
    d. Ascomycetes
    e. Basidiomycetes
7. What is a lichen?
    a. How is it constructed?
    b. What the different types of lichens?

c. What role do lichens play ecologically?

8. What is ERGOTISM?
   a. How would you get this disease?
   b. What are the symptoms?
   c. What historical relevance does it have?
   d. What are some other fungal diseases/conditions?
   e. What role do fungi play in medicine?

CH 29: PLANT DIVERSITY I

1. What organisms are responsible for the MOST oxygen in our atmosphere?
   a. Oxygen accounts for what % of the gases in the atmosphere
   b. What other gases are in the atmosphere?
   c. What species of plant produces them MOST oxygen?
2. What traits do the plants share with the charophytes?
3. What are some of the adaptations that plants had that allowed them to move to land?
4. What are the benefits/challenges of moving from water to land?
5. What are the 5 key traits that appear in nearly all plants but are absent in the charophytes?
   a. Alternation of generations
   b. Multicellular, dependent embryos
   c. Walled spores produced in sporangia
   d. Multicellular gametangia
   e. Apical meristems
6. Describe the stages for ALTERNATION OF GENERATIONS
7. What processes/structures control the movement of water in & out of the plant tissue?
8. Give examples of and describe the characteristics of the SEEDLESS VASCULAR plants.
9. Give examples of and describe the characteristics of the SEEDED VASCULAR plants.
10. What does it mean by the term “DOMINANT FORM”?

CH 30: PLANT DIVERSITY II

1. What is a seed?
2. What characteristics are common to all seed plants? Why are they important?
3. What are the advantages/disadvantages of spores vs. seeds?
4. What are some of the characteristics of the GYMNOSPERMS?
5. What I unusual about pine pollen grains?
6. What are the 4 gymnosperm phyla and examples of each one?
7. What are the 2 key adaptations of the ANGIOSPERMS?
8. What is a flower and the function of a flower?
9. What is a fruit and the function of a fruit?
10. What is the difference between a MONOCOT and a DICOT?
11. What is the difference between a MONOECIOUS and DIOECIOUS plant?
12. Be able to identify the characteristics of monocots and eudicots (slide 37 from the notes).

CH 32: OVERVIEW OF ANIMAL DIVERSITY

1. What are the key characteristics of ANIMALS?
2. How many animals species are currently described? Is that value accurate?
3. When did the most common ancestor of all living animals likely live?

4. Name a significant event for each of the eras listed below
    a. NEOPROTEROZOIC
    b. PALEOZOIC
    c. MESOZOIC
    d. CENOZOIC
5. What are the different types of BODY PLANS in animals?
    a. How do they differ?
    b. Why do they differ?
6. What are the different types of BODY CAVITIES in animals?
    a. How do they differ?
    b. Why do they differ?
    c. What fucntion(s) does a bady cavity serve?
7. How do PROTOSTOME and DEUTEROSTOME developments differ?
8. What are some of the ways in which phylogenies of animals have been analyzed?
9. What are 5 important points about the relationships among living animals that are reflected in their phylogeny?
10. What are the two major character states in the phylogeny of living animals that separate organisms into different clades? (slide 27)
11. What are the 3 clades seen within the BILATERIANS?