

## Biology 1 Lab

## Exam 4 Study Guide

The FINAL lab exam #4 is this week! To prepare for this exam you should study labs 11A, 12, and 13 only! View PowerPoints , Biodiversity 11 ,Biodiversity 111 and Plants/Fungi . Use the questions below as a guide for study and of course, however most questions are ALREADY on your lab writeup so this should be your “bible”. If you can, attend the final study session in room IT 128 from 2-4 p.m. on Tues, Dec. 7<sup>th</sup>. If you still didn't get some of the answers Email me and we can do an on-line office hour/chat. Lab 14 and Presentations will follow the final lab exam. The exam will start IMMEDIATELY so be prepared with your lab write ups ready to TURN IN and Parscore sheets available.

### Lab 11 :

1. Use your lecture instructor's PowerPoint and/or notes for this one as review of the genetic traits. There will be selected problems on genetics crosses.
2. Review Chapters
3. Compare and contrast monohybrid and dihybrid crosses?
4. Be able to complete a cross using Codominance and multiple alleles such as bloodtyping.
5. Be able to complete a dihybrid cross. For example: Show the F1 and F2 generations for 2 traits when given the parent genotypes. Example; See page. 11-4 lab hand out.
6. Know X-linked traits and how to read a pedigree ( both dominant and recessive)
7. Be familiar with Mendel's laws ; For Example: State and explain Mendel's Law of Segregation. Explain how this law derives from the movement of chromosomes in meiosis I.
8. Know all Genetics vocabulary

### Lab 12

- Review Chapters 22 and 23 in your textbook .
- View Biodiversity 11 and Plant/Fungi PowerPoints
- Know all Lab Slides/ Diagrams/ Bold-faced terms Well for this one!

### **Additional Questions:**

1. The evolution of plants has progressed to the Angiosperms where the gametophyte is internalized? How is this adaptation more advantageous to , say a separate gametophyte where the sperm have to swim to the archegonium ( egg)?
2. What are the characteristics of land plants?
3. In ferns, how does sperm travel from the anteridium to the archegonium?

4. What do we call the spore-bearing structure that gives rise to the female gametophyte in seed plants?
5. Trends in evolution of plants it towards HETEROSPORY. What does this mean? See page 23 section 5 for review. Remember, Seed plants are heteroporous and do NOT release their spores!
6. In seed plants: What are the fates of the microspores? What are the fates of the megaspores?
7. What are the type types of seed plants?
8. Compare and contrast **Dioecious** and **Monecious**.
9. Compare and contrast Plasmogamy with Karyogamy (FUNGI)
10. What are the major groups of Fungi? What is the structure? The asexual structure? Know examples the basic examples ( in lab) of these guys. i.e. Ascomycota . penicillin.
11. What do we mean be Alternation of generations?
12. Which stage dominates, the sporophyte or gametophyte in ...bryophytes? Pterophytes? Seed plants? Which is diploid the gametophyte generation or the sporophyte generation?

### **Lab 13 Animal Diversity**

- **Review Chapters 28 and 29**
- **Review the Biodiversity III PowerPoint**
- **Know all Slides and Questions/Answers on Lab 13**
- **Additional Questions :**
  1. How many germ layers in Comb jellies? Cniderians? Echinoderms?
  2. What does CELPHALIZATION mean?
  3. In which animals do we find celphalization? ( give groups)
  4. What do we call egg-laying mammals? Name two.
  5. What type of embryo cleavage is found in deuterostomes? Protostomes?
  6. Is there another distinguishing difference?
  7. Why are lancets and sea squirts considered chordates ?
  8. What are the three types of chordates? SUBPHYLUMS ARE CEPHALOCHORDATA, EUROCHORDATA and VERTEBRATA)  
To which group of chordates do humans, Sea squirts, and lancets , belong?
  9. In which animal do we find a scolex and proglottids? What are functions of these? Discuss animal phylum.
  10. What animal causes the disease Trichinosis? Give phylum; Discuss organism and then it life cycle and the disease.
  11. Name , compare and contrast the 3 types of annelids; Which one is a hermaphrodite? Which one is used in medicine and why?
  12. Can you identify the chelecerates? The mollusks? What is a mantle? Purpose of radula? Who has one?Special name for millipedes and Centipedes?
  13. To what group of animals do hydra belong? starfish?
  14. Why is a flatworm so flat? Which flatworm has absolutely no digestive tract?

15. What does it mean to be sessile? Which animals are sessile? Name two. Hint: They are not evolutionarily advanced.
16. In which animal do we find flame cells? Purpose?
17. The intermediate host of \_\_\_\_\_ is a snail.
- 18.
- 19.