

Student Number: _____ Seat Number _____

BIO 1130FF

An Introduction to Organismal biology
Final examination - Worth 35% of your final grade

December 21, 2015

Part A: Multiple choice questions - 29 points (1 point/question)

Please read the following instructions and sign in the space provided below to acknowledge the instructions:

- a) Cellular phones, unauthorized electronic devices or course notes (unless an open-book exam) are not allowed during this exam. Phones and devices must be turned off and put away in your bag. Do not keep them in your possession, such as in your pockets. If caught with such a device or document, the following may occur: you will be asked to leave immediately the exam, academic fraud allegations will be filed which may result in you obtaining a 0 (zero) for the exam.
- b) Fill in the bubbles for your name and student number and BIO1130FF for the course code. Fill in the same information in text in the boxes above the bubbles.
- c) Use only a pencil to fill in the answer sheet. If you erase a question be sure to erase all of the pencil mark. Don't place any marks anywhere on the sheet other than where the bubbles are for personal information or your answers.
- d) Do not place any answers on the question sheet.
- e) This is not an open book exam.
- f) A calculator is not required for this exam.
- g) **CAUTION to minimize paper waste this part of the exam has been printed back to back be sure you have all the pages**

NOTE: If you do not fill in the student number and course code as **BIO1130FF** it will be impossible to identify your answer sheet and you will receive a **ZERO** for this part of the exam

Signature

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Multiple choice questions - Place your answers on the answer sheet

FF.1 A cnidarian skeleton is

- a. Bony
- b. Cartilagenous
- c. Made of spicules
- d. made of ossicles
- X e. hydrostatic**

FF.2 Which of the following characteristics is not common to all animal species?

- a. heterotroph
- b. motility
- X c. nervous system**
- d. eukaryote

FF.3 The shell of a mollusc is secreted by the

- a. radula.
- X b. mantle.**
- c. periostracum.
- d. foot.
- e. visceral mass.

FF.4 Which type of plant tissue is specialized for conducting fluids?

- a. dermal tissue
- b. protoderm
- c. meristem
- X d. vascular tissue**

FF.5 The first larval stage in the life history of a fluke is the

- a. Redia
- X b. Miracidium**
- c. Cercaria
- d. Sporocyst
- e. Oncomiracidium

FF.6 A feature that appeared about the same time as jaws in vertebrates was _____.

- a. cranium
- X b. movable paired fins**
- c. amniote egg
- d. gill arches

FF.7 The bodies of arthropods are supported mainly by

- X a. an exoskeleton.**
- b. only nonskeletal structures.
- c. joined exo- and endoskeletons.
- d. a hydrostatic skeleton.

FF.8 The specialized male gametophyte of seed plants, such as gymnosperms, is called a(n)

- a. ovule.
- X b. pollen grain.**
- c. strobilus.
- d. sporopollenin.

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- FF.9 Which of the following is found in some tetrapods but never in fish?
- a. asexual reproduction
 - b. internal fertilization
 - c. viviparity
 - d. extensive parental care
 - X e. production of amniotic eggs**
- FF.10 What accounts most directly for the extremely fast growth of a fungal mycelium?
- a. a dikaryotic condition that supplies greater amounts of proteins and nutrients
 - b. a long tubular body shape
 - X c. rapid distribution of synthesized proteins by cytoplasmic streaming**
 - d. the readily available nutrients from their ingestive mode of nutrition
- FF.11 Which of the following characteristics distinguishes the life cycle of a pine from that of a fern?
- a. Microspores and megaspores are produced in pines.
 - b. No antheridium is present in pines.
 - c. Spores grow into gametophytes inside the sporangia in pines.
 - X d. all of the choices**
- FF.12 The main benefit to a plant from a mycorrhizal association is
- a. enhanced water uptake.
 - b. removal of excess carbohydrates.
 - X c. enhanced mineral ion uptake.**
 - d. enhanced flow of carbohydrates to the roots.
- FF.13 The evolution of which of the following features freed land plants from requiring water for reproduction?
- a. lignified stems
 - b. fruits and roots
 - X c. seeds and pollen**
 - d. flowers and leaves
- FF.14 Which of the following do all fungi have in common?
- a. meiosis in basidia
 - X b. absorption of nutrients**
 - c. coenocytic hyphae
 - d. symbioses with algae
 - e. sexual life cycle
- FF.15 Small, photosynthetic protists found in aquatic habitats are collectively called
- a. chrysophytes.
 - b. zooplankton.
 - c. phagoplankton.
 - X d. phytoplankton.**

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FF.16 Sperm in sponges is commonly formed from

- a. Pinacocytes
- b. Porocytes
- X c. Choanocytes**
- d. Sclerocytes
- e. None of the above

FF.17 Which of the following is a correct element of alternation of generations?

- a. Two spores unite to form a zygote.
- b. The sporophyte is haploid and produces gametes.
- c. The gametophyte is diploid and produces gametes.
- d. The gametophyte is haploid and produces spores.
- X e. The sporophyte is diploid and produces spores.**

FF.18 The original function of the water vascular system of echinoderms was probably

- a. Locomotion.
- X b. feeding.**
- c. excretion.
- d. respiration.
- e. circulation.

FF.19 The first vertebrates to produce amniotic eggs were early members of the class

- X a. Reptilia.**
- b. Gnathostoma.
- c. Amphibia.
- d. Mammalia.
- e. Agnatha.

FF.20 Which of the following occurs in the life cycle of both mosses and angiosperms?

- a. The sporophyte is the dominant generation.
- b. The gametophyte is the dominant generation.
- c. Spores develop into sporophytes.
- X d. The sporophyte produces spores.**

FF.21 To nearest million years how long do most species exist before they go extinct

- a. 45
- b. 20
- X c. 10**
- d. 0.5
- e. 15

FF.22 The protostome animals are divided into lineages, or clades. How many clades are there?

- a. 1
- X b. 3**
- c. 2
- d. 4

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FF.23 When mesoderm cells in a developing animal embryo form near the lip of the blastopore and split open to form the coelom; the coelom is described as being this type.

- a. acoel
- b. pseudocoel
- X c. schizocoel**
- d. enterocoel
- e. blastocoel

FF.24 Although not all the events in the evolution of plants may be listed, for those that are, what is the correct sequence of events for A: Seed, B: Lignification, C; Stomata, D: Chloroplast DNA inversion

- a. B, C, D, A
- b. C, D, B, A
- X c. C, B, D, A**
- d. B, D, C, A
- e. None of the above

FF.25 The outer layer of the insect exoskeleton called the _____ is made of a waxy lipoprotein, which makes it impermeable to water.

- a. procuticle
- b. mesocuticle
- X c. epicuticle**
- d. endocuticle
- e. Collagenous cuticle

FF.26 Which of the following phyla is included in the Lophotrochozoa?

- X a. Bryozoa**
- b. Onychophora
- c. Nematoda
- d. Arthropoda

FF.27. Among the Lophotrochozoa, segmentation evolved in _____.

- a. no group
- X b. only Phylum Annelida**
- c. Phylum Annelida and Phylum Mollusca
- d. all phyla

FF.28. Which of the following characteristics is found only in the angiosperm life cycle?

- X a. double fertilization**
- b. megaspores
- c. ovule
- d. pollen tube

FF.29. One advantage that angiosperms have is a unique triploid _____, a nutritive tissue produced during fertilization.

- a. pollen sac
- b. ovule
- X c. endosperm**
- d. ovary