



Highlander Help

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Good Luck!

GENERAL BIOLOGY 101
LAB FINAL EXAM -- FALL 2008
DISCUSSION SECTION- 11
PRITI DHABEKAR

94

DATE - 12/02/08

PRINT your name _____

Instruction

You have 90 seconds at each station.

Please limit your answers to the space provided.

Read all the questions carefully, write clearly. GOOD LUCK.

PART 1

STATION 1-PLANT DIVERSITY (8)

1) Which generation is dominant in A and B? (2)

A gametophyte

B sporophyte

2) Which plant is more advanced A or B? Why? Give two reasons. (4)

B because it has vascular tissue, and it has true stems, roots, and leaves.

3) In what habitat you will find A? How this habitat is favorable to it? (2)

in moist habitat because it needs a lot of water since it does not have xylem or phloem

STATION 2-PLANT DIVERSITY (8)

4) Identify the labeled structures and give function of each. (8)

A Anther, makes the male gametophyte (pollen grain)

B Stigma, it is sticky to hold pollen grains

C Ovary, holds the unfertilized egg (female gametophyte)

D Filament, supports the anther

STATION 3-PLANT DIVERSITY (8)

5) Examine the flower A and B. List 2 pollination syndromes for A and B each. (4)

- A ~~wind~~ small sepal and petals
and not really colorful, or "showing off"
- B white colored, ~~heavy~~, strong odor

6) What are the probable pollinator for A and B? Explain why. (4)

for A wind is the pollinator because it is not really showing off its petals or sepals, for B a moth is pollinator because it has a sweet strong odor and light colored.

STATION 4-PLANT DIVERSITY (8)

7) Identify the male cone and female cone? Give 2 differences. (4)

- A male cone, has antheridium, smaller than female
- B female cone, has archegonium, bigger than male

8) Give two features that make gymnosperms more advanced plants than ferns. (4)

gymnosperms have seeds while ferns have spores,
these carriers have 3 "generations" in their seed making them
better than ferns, and ferns have fronds which are like leaves
while gymnosperms don't

STATION 5 - PLANT DIVERSITY (7)

9) Which type of reproduction this plant shows sexual or asexual? (1)

asexual

10) What type of adaptation it shows to reproduce so? (2)

modified stem

11) What are the advantages and disadvantages to reproduce so? (4)

it can reproduce quickly under favorable conditions which is an advantage, and the disadvantage is that if there is a disease it will completely destroy that plant.

STATION 6- ANIMAL DIVERSITY (8)

12) Name the phylum of the specimen, major class and the method of feeding. (6)

Mollusks. A is the bivalves and B is the cephalopod.
A is a filter feeder and B is a jet propeller, it uses its tentacles.

13) Give two characteristics features of this phylum. (2)

They are protostomes
They are bilaterally symmetrical

STATION 7- ANIMAL DIVERSITY (6)

14) Identify the phylum and major class of A and B. (2)

arthropods.
A is arachnids
B is insects

15) Give 2 structural differences between A and B. (4)

A has a cephalothorax and abdomen
B has a head, thorax, and abdomen
and A has 8 simple eyes while B has 1 compound eye.
A has antennae and B has no antennae.

STATION 8- ANIMAL DIVERSITY (5)

16) Identify the phylum of specimen. (1)

Chordates

17) List two distinguishing characteristics of this phylum. (2)

bilateral symmetry
and it's a deuterostome

18) Which are the other animals belong to this phylum? List two (2)

humans and tunicates

PART 2 SHORT ANSWER QUESTIONS

- 1) Give two differences between gametophyte generation and sporophyte generation of life cycle of plants. (4)

Sporophyte generation is diploid while the gametophyte is haploid. The sporophyte has vascular tissue while the gametophyte does not.

- 2) Briefly describe the two evolutionary trends that occurred in the evolution of plants. (4)

One evolutionary trend is the complex vascular tissue, the xylem and phloem. Helped plants a lot because now they can get taller and allow the transportation of minerals and nutrients up and down the plant. The other evolutionary trend is the development of roots and leaves which helped plants absorb water and sunlight needed for photosynthesis.

- 3) Explain the process of double fertilization. Why it is called double fertilization? (4)

The pollen grain sticks to the stigma, then the pollen tube is formed allowing the generative nuclei to go down to the ovary and the ovule. The generative nuclei split and one fertilizes the egg and the other fertilizes the polar nuclei making the triploid endosperm. It's called double because there are two fertilizations.

- 4) What is the difference between gastrovascular cavity and spongocoel? (4)

The gastrovascular cavity is used for digestion while the spongocoel is used for water circulation and filter feeding.

- 5) Give one difference for both the digestive and reproductive systems of the tapeworms and flatworms. (4)

In flatworms there is a gastrovascular cavity which is used for digestion while the tapeworms don't have a digestive system because the host digests the food for them. And the reproductive system is only represented in tapeworms while the flatworms have separate reproductive systems.

- 6) What makes starfish more closely related to humans than mollusks are? (4)

Because they are deuterostomes which means the blastopore becomes the anus and they also show bilateral symmetry at a larval state.

- 7) What is a coelom? Do humans have a coelom? (2)

A coelom is a hollow cavity used for making room for internal organs or left empty so the organs can slide past each other like the human lungs.

PART 3-DISCUSSION QUESTION

1) What is green house effect? How it is related to the global warming? (4)

The green house effect is the thickening of the ozone layer trapping carbon emissions making the planet hotter.

This is basic global warming because now the ice glaciers are melting due to this process of heating.

2) What are two potential adverse environmental or economic effects that could result from global warming? (4)

Global warming will raise the water levels ^{and it} will put land under water eventually. It kills animals who got used to polar ice glaciers being there such as the polar bears who now die because they have to swim for long distances because of the lack of ice glaciers.

3) What is GMO? List at least 2 benefits and controversies of GMO? (4)

Genetically modified organisms. It is modifying foods at a genetic level. The two benefits are that it is cheaper than organic food and it is less immune to disease. The controversies are that GM foods are not natural foods which helps the body and leaves out any new drugs from entering the body.

4) There is no controversy regarding the use of genetically modified medicine but it is not a case with food, what is your reaction to this? (4)

My personal feeling is that if a person has the money to buy organic food on a regular basis than go ahead. But not everybody is rich which is why GM foods are good for the general public because they are cheap. I personally eat GM foods and I am relatively healthy. So I don't see the problem with GM food.