Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Take home portion of second exam. 35 points.

Submit via Moodle as a doc.

Word docs often embed non-functional web links. I have an old copy of word that proves incompatible with many newer machines and Google docs. So be prepared to cut and paste relevant URLs.

1. On Turbellarians. 10 points.

a. What are neoblasts?

b. Describe mating rituals in marine turbellarians.

2. Compare the overall morphologies of a typical cestode and trematode to that of the typical free-living planarian. 10 pts.

Answer in one paragraph in your own words. Do not simply paste cut and paste goggled information. I will take off for evidence of such. You should include resemblance to free living forms, types of organs found, any modifications for increased reproduction (hint proglottids).

3. You are to **compare** the life cycle and mode of transmission to hosts in a cestode and trematode using the CDC website. 10 points <https://www.cdc.gov/parasites/az/index.html> You will need then to include similarities as well as differences. Please do not just give me diagrams of the life cycles. This is not **you** comparing them. This is allowing me to do the comparison (0 credit).

**You must compare one species of cestode to one species of trematode**.

You may use the list below or simply choose species that interests you.

For the species below, I have given one website with information to facilitate your research. On most of these general information pages, you will find links to the biology, including lifecycle, of the species being examined. For those of you who feel more adventurous or have a species of Cestoda and Trematoda you hold dear, simply search for information on the CDC website,

<https://www.cdc.gov/parasites/az/index.html>, on those species. If the species is on the website you may use it. It has to be a Platyhelminthes species. You have to choose one cestode and one trematode.

**You will have to cut and paste the urls listed below in most cases.**

**Cestodes**

Dipylidium caninum

<https://www.cdc.gov/parasites/dipylidium/index.html>

Taenia solium

<http://www.cdc.gov/parasites/taeniasis/>

**Trematodes**

Paragonimus kellicotti

<https://www.cdc.gov/parasites/paragonimus/>

Schistosoma haematobium

<https://www.cdc.gov/parasites/schistosomiasis/>

You are to turn in a comparison **table**. In your table you should have rows or columns for the items listed below.

a. Number and types of larval forms

b. All hosts, intermediary or secondary (house larval stages) and definitive (primary-houses adult producing eggs and sperm) hosts

c. Means of transmission to humans or dogs

d. Diseases caused and symptoms

e. Any interesting facts you may find

No credit will be given to students turning in identical tables with the exact same sequence of information, same phrasing, etc. No two minds think that much alike.

4.

Platyhelminthes and Nematode parasitic species are known as helminthes.

Go to the website below.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4374592/>

Read the abstract, helminth therapy in humans and conclusion

Answer the following questions. What is helminth therapy? Would you use it, if FDA approved the therapy? Why or why not? 5 points.

Note: As yet Platyhelminthes worms have not been tested for helminth therapy. All test results to date are based on work with nematodes, the other clade of “worms” that has numerous parasitic species and is more easily cultured than Platyhelminthes.