



*Exploring the World of Science*

## Herpetology

2018 Division B

### University of Minnesota Golden Gopher Invitational

This exam will consist of three portions, 25 points each for a total of 75 points. You will be asked to identify pictures of different specimens as listed on the official National 2018 Science Olympiad Herpetology list and to answer some related questions.

Tie breaker questions are available at the end, and in the event of a tie, they will be used first, followed by reverse grading. It is, therefore, to your advantage to finish the exam.

**Section 1: \_\_\_\_\_/25**

**Section 2: \_\_\_\_\_/25**

**Section 3: \_\_\_\_\_/25**

**Tie Breakers: \_\_\_\_\_/3**

**Total: \_\_\_\_\_/75**

**Section 1 (25 points)**

\*Note: ensure your picture corresponds to the letter of specimen you are filling on your sheet.

A.

1.) Identify the specimen by genus and by common name. **(2 points)**

2.) What is the general geographical location this specimen can be found? **(2 point)**

B.

1.) The shape of this specimen's tail indicates that it likely dwells in what habitat? **(2 points)**

2.) Based on the outer appearance of this specimen and your answer above, what family does this specimen likely belong to? **(1 point)**

3. Except for one species, the young in this family are born in what manner? **(2 point)**

C. This is a drawing of a cross section of a specimen of snake.

1. This body shape is characteristic of what genus of snake? Give the common name as well. **(2 points)**

2. These snakes tend to have rows of small, curved teeth, which serves what purpose? **(2 points)**

D. Be careful when answering this question

1. Identify first the family, then the genus of this specimen. **(2 points)**
2. Name two features that make this specimen distinctively *Lacertila*. **(2 points)**
3. Name the characteristic defense mechanism of this specimen to avoid predation. **(2 points)**

E.

1. Which of the snakes (1, 2, 3, or 4) does not belong in the same family? **(3 points)**
2. Which snake or snakes (1, 2, 3, or 4) is harmless? **(3 points)**

## **Section 2 (25 points)**

A.

1. Provide the family and common name of the specimen shown. **(2 points)**
2. What are the names of the dorsal and ventral parts (respectively) of the specimen's shell? **(2 points)**

B.

1. Provide the family and common name(s) of the specimen shown. **(2 points)**
2. Why was the specimen given this particular common name(s)? **(2 points)**

3. What is a distinguishing bodily feature (excluding primary sex characteristics) that separates males and females of this specimen? **(2 points)**

C.

1. Give the family and common name of the specimen shown. **(2 points)**

2. The distinguishing feature between this specimen and other specimens of the order *Chelonia* is: **(2 points)**

3. The shape of the specimen's snout suggest that it dwells in what kind of habitat? **(1 point)**

D.

1. Name the main distinguishing feature between this specimen and the tortoise. **(1 point)**

2. Name two characteristics that make this specimen suitable for marine life. **(2 points)**

3. Describe how temperature affects the hatching sex of the offspring of this specimen. **(2 points)**

E.

1. Classify the top and bottom pictures by family. **(2 points)**

2. Name three ways to distinguish crocodiles from alligators **(3 points)**

### **Section 3 (25 points)**

A.

1. Give the genus and common name for the specimen shown. **(2 points)**
2. This particular specimen's toes have a distinguishing characteristic. Name this characteristic. **(1 point)**
3. The breeding season(s) of this specimen is(are) **(2 points)**

B.

1. Give the family name and common name for the species shown. **(2 points)**
2. What is one ability this particular family possesses which distinguishes it from other families of the same order? **(1 point)**
3. Describe the habitat of the larvae and the habitat of the metamorphosed adult **(2 points)**

C.

1. One of these is not like the others. Name the specimen (#1, 2, 3, 4) that does not belong in the same family as the other shown. **(1 point)**

2. For the specimen you answered above, what physical characteristics make it suitable for its habitat? **(1 points)**

3. Which specimen(s) shown lack lungs? **(3 points)**

D.

1. Name the family and common name of the specimen shown **(2 points)**

2. What habitat does this specimen inhabit, and what characteristic of the specimen's feet helps it thrive in this habitat? **(2 points)**

3. What geographical location is this family of specimen usually found? **(1 point)**

E

1. Name the family and common name of the specimen shown. **(2 points)**

2. The habitat of the specimen shown is: **(1 point)**

3. The general snout vent length of members belonging to the same family as the specimen shown is: **(2 points)**

**Tie Breakers: (1 point each)**

Emydoidea is found to be able to reproduce until they are how old?

Microhylidae of Australia and New Guinea bypass the tadpole stage of development. The best explanation for this adaptation is?

Specimens in the genus *Crotalus* have what mode of reproduction? (e.g. do they lay eggs?)