Captains Tryouts 2019

Herpetology Key

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Points: 114
Rules

1. 2.5 minutes per station, 20 stations.

2. Use only your reference binder.

3. Point values are provided in parentheses after each question, and the total number of points can be found on the last slide of this test.

4. 2.5 x 20 = this test takes 50 minutes.

5. GLHF! :)

1. What is the family of this salamander? (1) **Salamandridae**
2. What is the range of this family? (1) **the whole Northern Hemisphere**
3. What is true about this salamander’s sense of direction? Be as detailed as possible. (2) **it is exceptionally powerful, sense magnetic fields and solar positioning** (1 point for correct strength relativity, 1 point for description)
4. Does this family display costal grooves? (1) **no**
5. What does the male salamander do before mating? (1) **circle the female**
1. What is the genus of this turtle? (1) **Malaclemys**
2. What makes up the diet of these turtles? (2) snails/mollusks, crustaceans, fish, insects, carrion *(0.5 points per accurate answer)*
3. What is special about sexual dimorphism in this turtle? (1) greatest disparity between males and females of any North American turtle
4. What behavior does this turtle display when approached? (1) going into a nearby water source
5. Which US state has this animal as their state reptile? (1) **Maryland**
1. What is the genus of this lizard? (1) **Sauromalus**
2. What is the average clutch size of this lizard? (1) **5-16 eggs**
3. How large are the groups that these lizards reside in? (1) **1 (solitary)**
4. How many critically endangered species does this genus have? (1) **1**
5. Do members of this genus hibernate? (1) **no**
1. What is the genus of this snake? (1) **Thamnophis**
2. What behaviour is being displayed above? (1) **mating (ball)**
3. Are snakes of this genus ovoviviparous or oviparous? (1) **ovoviviparous**
4. Define brumation. (1) **a state or condition of sluggishness, inactivity, or torpor exhibited by reptiles during winter or extended periods of low temperature** (Merriam-Webster)
5. What organ do snakes of this genus use to communicate? Provide all names if there are more than one. (1) **Jacobson’s organ; vomeronasal organ** (0.5 points per name)
1. What is the genus of this snake? (1) **Leptotyphlopidae**
2. What does its diet consist of? What is the feeding mechanism that it uses called? (2) **ants and termites, soft-bodied/small invertebrates; mandibular raking** (0.5 pts per diet answer, 1 point for feeding mechanism)
3. What is special about their eyes? (1) **they are covered by scales**
4. Where on its body does the snake have larger scales? (1) **snout**
5. How does it defend itself from being attacked by its prey? (1) **pheromones**
Station 6

1. What is the family of this crocodilian? (1) Alligatoridae
2. What color are the stripes on the young? (1) yellow
3. Which sex initiates the mating process? (1) females
4. What are the types of walking for these animals? (1) high and low walking
5. At what temperature do the sex of eggs change to male? (1) above 33 degrees Celsius (91.4 degrees Fahrenheit)
1. What is the genus of this turtle? (1) **Glyptemys**

2. Describe the physical appearance of hatchlings of this genus. (3) **nearly circular carapace, tails are almost as long as the carapace, uniform grey or brown colour dorsally** (1 pt per answer)

3. What is the IUCN conservation status of this turtle? (1) **endangered**

4. Does the sex of the hatchlings depend on the temperature at which they are incubated? (1) **yes**

5. From whence does this turtle derive its specific/common name? (1) **the rough, “sculptured” appearance of its carapace (lended by its well-defined scutes)**
1. What is the common name of this frog? (1) **Cricket frog**
2. What is the highest point in the range of the southern cricket frog? (1) **Virginia**
3. What sound does this frog make? (1) **pebble-like clicking sound (like rocks tapped together)**
4. How are these frogs useful to humans? (1) **pest control**
5. How many feet can this frog leap? (1) **up to 3 feet**
1. What is the common name of this snake? (1) brown snake
2. Who is the genus of this snake named after? (1) David Humphreys Storer
3. What time of year do these snakes give birth to their young? (1) late summer
4. What is the difference between the tails of males and females of these snakes? (1) males tend to have longer tails
5. What do these snakes do when they feel threatened? (1) flatten their bodies to appear larger, assume an aggressive stance, and musk
1. What is the genus of this animal? (1) \textit{Urosaurus/Uta}
2. How long does a clutch of eggs of this lizard take to develop? (1) 30 days
3. Which sex establishes territories? (1) female
4. What is the range of this genus? (1) SW United States and Northern Mexico
5. How high up (from sea level) can this lizard live? (1) 2700 feet
1. What is the family of this turtle? (1) **Cheloniidae**
2. What is special about this turtle's carapace? (1) **soft, leathery, lacks scutes**
3. In which waters does mating take place? (1) **shallow offshore waters**
4. Do these turtles feed on cnidarians? (1) **yes**
5. What is special about the relation between the front limbs and the back limbs of this turtle? (1) **front limbs are stronger than back limbs**
1. What is the family of this toad? (1) Scaphiopodidae

2. How can you tell if this is a true or spadefoot toad? Name 3 differences between true and spadefoot toads. (3) Spadefoots have teeth on upper jaw, no parotid glands, vertical pupils, and smoother/less warty skin (1 pt per difference; up to 3 pts)

3. What type of soil does this toad live in/prefer? (1) Loose soil

4. How many species of this genus are not of least concern? (1) 1

5. What do tadpoles of this toad eat? (1) Plankton
1. What is the family of this lizard? (1) Cophosaurus/Holbrookia
2. How are the stripes of males different from those of females? (1) darker, more distinct
3. When do these lizards perform push-ups? (1) Males do them to attract mates
4. What is special about their ears? (1) no external ear openings
5. How active are these lizards during the day? (1) extremely active
1. What is the family of this salamander? (1)  Sirenidae
2. What structure do the young of this family have? (1)  fin on their backs
3. Are the eggs laid singly or in groups? (1)  both
4. In what matter does this salamander eat? (1)  swallowing prey whole
5. How is this salamander used by humans? (1)  as bait
1. What is the common name of this turtle? (1) **chicken turtle**

2. On average, how many times larger are females than males? (1) 1.5 times

3. What is a nickname of this turtle? (1) **snake neck**

4. What is the courtship ritual of this turtle? (1) **male shakes claws against female's face**

5. Define diapause. (1) **a period of suspended development in an embryo**
1. What is the genus of this snake? (1)  **Masticophis**
2. What type of habitats do these snakes prefer? (1)  **dry**
3. How many species are in this genus? (1)  **11**
4. The underside of the tail of this snake may be a different colour than the rest of the ventral surface. What colour is it? (1)  **pink/salmon/coral (all are acceptable answers)**
5. What is the distribution of this snake in the US? (1)  **can be found in the southern half of the US**
1. What is the family of this frog? (1) Ranidae
2. Describe the pupils of this frog. (1) horizontal
3. Which former species of this family is extinct? (1) Las Vegas Leopard Frog
4. Is this family monophyletic? What is the difference between paraphyletic clades and polyphyletic clades? (2) no; paraphyletic clades have a single ancestor (1 pt per question)
5. Which is the only genus of this family found in the Americas? (1) Rana
1. What is the genus of this salamander? (1)  **Eurycea**
2. What is an alternative name (besides its common name) for some members of this genus? (1) **cave salamanders**
3. In what habitat do these salamanders live? (1) **near streams in forests**
4. What is the average height above sea level that this salamander lives? (1) **1200 ft**
5. Where are eggs of this salamander laid? (1) **underside of logs near streams**
1. What is the family of this salamander? (1) **Aneides**
2. What is the common name of the species of this genus that is found in the East Coast? (1) **green salamander**
3. In what type of ecosystems are these salamanders found? (1) **mountains**
4. What behavior does this salamander display when handled? (2) **making squeaks and biting (1 pt per behavior)**
5. About how large can salamanders of this family grow? (1) **up to 7.25 inches**
1. Larval amphibians and adults often produce different nitrogenous waste. What do they each produce? (2) *juveniles: ammonia, adults: urea (1 pt per correct answer)*

2. Name four differences between garter and ribbon snakes. (2) *ribbon snakes are thinner, have longer tails (⅓ or more of total length, compared to garters’ ¼ or less), narrower heads, side stripes on the third and fourth scale rows, unmarked labial scales, white spot in front of each eye (0.5 pt per difference; up to 2 pts total)*

3. What is the name of the membrane that covers crocodilian eyes for protection while underwater? (1) *nictitating membrane*

4. What is the name of the long bone of fused vertebrae that can be found in anurans? (1) *urostyle*

5. What is the common name of the smallest sea turtle in the world? (1) *Kemp’s ridley*

6. What famed early herpetologist wrote Herpetology of Missouri and had a spadefoot toad named after him (1)? *Julius Hurter*

7. Name the four types of snake locomotion. (2) *lateral undulation, rectilinear movement, sidewinding, concertina (0.5 pt per answer)*