

## 2024 Area 1 Envirothon Wildlife Test

1. Mute swans are a highly invasive, non-native species found in Ohio that threaten native wildlife and habitats. They arrived in North America in the mid-1800s from Eurasia. Which statement below accurately describes how **and** why mute swans arrived in the United States?
  - a. They were introduced for people to hunt as a food source.
  - b. **They were introduced to decorate parks and estates.**
  - c. They migrated on their own to broaden their home range.
  - d. They were accidentally introduced through ballasts on ships.
2. Monarch populations have been declining alarmingly in recent years. Which cause is **NOT** a reason for their population decline?
  - a. Loss of milkweed
  - b. Timbering of Mexican oyamel fir forests
  - c. **Timbering of white oak trees for bourbon barrels**
  - d. Increase in untimely weather events characterized by hail, freezing temperatures, and high winds
3. Ohio confirmed its first case of CWD in wild white-tailed deer in 2020. CWD is a highly contagious, neurological disease that is always fatal. What causes CWD?
  - a. **Prion**
  - b. Bacteria
  - c. Virus
  - d. Worm
4. In 2023, the Ohio Division of Wildlife celebrated its 150<sup>th</sup> anniversary. Over the years, the Ohio Division of Wildlife has reintroduced several species that were once extirpated from the state in efforts to restore native wildlife. Which species has NOT been reintroduced in Ohio by the Division of Wildlife?
  - a. White-tailed deer
  - b. River otter
  - c. **Bobcat**
  - d. Wild turkey
5. Which non-native, invasive species outcompetes native songbirds such as bluebirds and purple martins?
  - a. **House sparrow**
  - b. Red-winged blackbird
  - c. Northern cardinal
  - d. Blue jay

6. The North American Model of Wildlife Conservation has seven principles that shape wildlife conservation and management practices in the United States and Canada. Which of the following is **NOT** one of the seven principles?
- Wildlife Resources are a Public Trust: The government manages wildlife on behalf of the public today and for future generations. States or provinces make and enforce most management regulations.
  - Democracy of Hunting: Laws offer the opportunity to hunt and fish to all people, not just those who are privileged.
  - Science-based Wildlife Policy: Science informs decision-makers when making wildlife policy and structuring management plans.
  - Wildlife is a National Resource: Federal agencies and state agencies work independently to determine wildlife management practices. Wildlife stays within national borders.**
7. Hunters play an important role in wildlife conservation such as contributing millions of dollars by purchasing licenses, permits, and stamps. Which of the following must an Ohio waterfowl hunter over the age of 16 purchase to legally hunt in Ohio?
- Hunting license
  - Ohio Wetlands Habitat Stamp
  - Federal Migratory Bird Hunting Stamp
  - All of the above**
8. Early successional habitat establishment responds well to disturbance. What form of disturbance best promotes early successional habitat?
- Flood
  - Fire**
  - Drought
  - Human development
9. What is the largest amphibian in Ohio?
- American bullfrog
  - Common mudpuppy
  - Eastern hellbender**
  - Jefferson salamander
10. This carnivore has been sighted on OSU Lima campus and throughout Ohio in woodland, farmland, and mixed pasture habitats. At birth, its pups have grayish brown fur that by the second week becomes light yellow around the neck and head. By adulthood, the coat takes on its typical red and grayish-white appearance, complete with a white-tipped tail. Which mammal is this?
- Gray Fox
  - Gray Wolf
  - Red Fox**
  - Coyote

11. This migratory bird was once commonly referred to as a Plover or as the Bartramian Tattler. It is an endangered species in Allen County, Ohio. Its habitat includes grasslands and prairie where it forages by pacing to find grasshoppers and other insects. Which bird is this?
- a) Upland Sandpiper
  - b) Northern Cardinal
  - c) Great Blue Heron
  - d) American Bittern
12. Bird species *Anthus spragueii* and *Bartramia longicauda* prefer grassland or prairie habitats. Absence of these species from a suitable location is an alert to scientists of a potential problem with the area, making both species
- a) Groundcover species
  - b) Indicator species
  - c) Keystone species
  - d) Wasting species
13. Ohio's list of "species of concern" includes this nocturnal mammal with keen senses of smell and hearing but poor sense of vision. It can dig rapidly and makes complex burrows in dry grasslands, fields, and pastures. It is in the family Mustelidae and has a white stripe extending from its nose to its back. Which animal is this?
- a) Raccoon
  - b) Eastern Cottontail Rabbit
  - c) Bobcat
  - d) American Badger
14. This mammal, common to OSU Lima campus, is considered a nuisance species by many people. The species' uncanny ability to adapt to life alongside humans has been remarkable. Its melanistic form has provided interesting genetic studies to biologists, and these individuals are highly noticeable alongside their traditionally-colored varieties. What animal of order Rodentia is this?
- a) Eastern Cottontail Rabbit
  - b) Eastern Gray Squirrel
  - c) Eastern Chipmunk
  - d) Southern Spotted Skunk
15. This common semiaquatic animal has two coats of hair: a thick undercoat for warmth and an outer coat of long, waterproof hairs. Its dark brown fur almost stops at its long, skinny tail which has flattened sides for use as a rudder while swimming. Name this large rodent, adults of which may reach as much as 2 kilograms.
- a) Beaver
  - b) Coyote
  - c) Muskrat
  - d) Brown rat

16. In 2020, there were 5 nests sighted in Allen County, Ohio for this avian top predator. Which statement is true about this symbol of our nation, the Bald Eagle?
- a) Bald Eagles nest in late summer.
  - b) Bald Eagles are on the federal endangered species list.
  - c) Bald Eagles are protected under the Bald and Golden Eagle Protection Act of 1940.
  - d) Aerial surveys utilize drones to search for and fly as close as possible to Bald Eagle nests to count hatchlings.
17. According to the US Fish and Wildlife Service, habitat for the Federally endangered Eastern Prairie Fringed Orchid occurs in Allen County, Ohio. This plant features upright, leafy stems with a flower cluster at the top with deep nectar tubes. One of its few pollinators is the Carolina Sphinx Moth, whose larval form is a common garden pest. What is the name of the larval stage of this moth?
- a) Tobacco (Tomato) Hornworm
  - b) Woolly Bear Caterpillar
  - c) Potato Aphid Caterpillar
  - d) Corn Borer Worm
18. The Ohio Department of Health recommends contacting a local health department or animal control agency if someone has concerns about a bat on their property. Which disease below may be carried by bats and is caused by a fungus?
- a) Rabies
  - b) Scarlet fever
  - c) Anthrax
  - d) Histoplasmosis
19. This invasive arachnid was found to have reached Ohio in 2021, after a farmer reported three dead cattle. Other species of this arthropod already living in Ohio are known to transmit diseases to many animals including people. Which animal is this?
- a) Asian Longhorn Tick
  - b) Crowned Slug Moth
  - c) Black Widow Spider
  - d) Field Wolf Spider
20. If you walk across OSU Lima campus at night, you can frequently see these omnivorous marsupials out foraging. They are thought to have been rare before Ohio was heavily inhabited by humans but began to increase in number as land was cleared for agriculture. Which animal is this?
- a) Striped Skunk
  - b) Common Muskrat
  - c) Raccoon
  - d) Virginia Opossum

21. What does crepuscular mean?
- Most active during the day
  - Most active during the night
  - Active at all times of day
  - Most active at dawn and dusk
22. Ohio has several species of bats listed as “endangered” or “threatened” in Ohio. However, only one species of bat found in Ohio is listed as federally endangered. In fact, it has been federally listed under the Endangered Species Act since 1967. Which species is it?
- Indiana bat
  - Hoary bat
  - Tri-colored bat
  - Little brown bat
23. Only three species of venomous snakes are found in Ohio. What characteristic can be found in **all** of Ohio’s venomous snakes?
- Tail ends in a rattle
  - No pits—only nostrils are present
  - Triangle shaped head
  - Round pupils
24. What are the three types of venomous species of snakes in Ohio?
- Cottonmouth, northern copperhead, timber rattlesnake
  - Northern copperhead, timber rattlesnake, massasauga
  - Northern watersnake, timber rattlesnake, northern copperhead
  - Gray ratsnake, massasauga, northern copperhead
25. In the 1800s, much of North America’s wildlife was exploited for commercial use by market hunters which led to rapid population decline in certain species. Thanks to efforts by early conservationists such as former President Theodore Roosevelt, the \_\_\_\_\_ passed in 1900 and eliminated the commercial sale of wildlife.
- Pittman Robertson Act
  - Lacey Act
  - Clean Air Act
  - Dingell Johnson Act
26. Bullfrogs are an underappreciated source of protein that can be found in ponds and wetlands across Ohio. An Ohio fishing license is required to catch bullfrogs. At what age are you required to purchase a license?
- 18
  - 21
  - 16
  - 12

27. Today there are about 650,000 acres of wetlands in Ohio. Despite that number, Ohio has lost what percentage of wetlands since European settlement?
- 55%
  - 80%
  - 90%
  - 72%
28. Invasive species are non-native species that, once introduced, can cause or are likely to cause harm to the environment, the economy, or human health. Which of the following are examples of invasive species that have caused significant harm in Ohio?
- Zebra mussels
  - Round goby
  - Amur Honeysuckle
  - All of the above
29. While walking in your backyard, you find a baby rabbit sitting in the middle of the grass all by itself. You assume that it is an orphan. What **shouldn't** you do?
- Observe it from a distance to see if it is injured
  - Put water and food near it
  - Call a wildlife professional to ask for advice
  - Keep pets away from it
30. Wildlife managers utilize the number of teeth and tooth wear to age white-tailed deer. How many teeth do deer have?
- 22
  - 28
  - 36
  - 32
31. Milkweed species are generally considered to be from the Dogbane Family (Apocynaceae), of which monarchs use 13 species as a host plant. Which of the following is NOT one of the 13 species?
- Swamp milkweed
  - Honey-vine
  - Tall ironweed
  - Green milkweed
32. What disease is caused by a fungus that irritates bats during hibernation, causing them to burn through fat reserves during hibernation?
- White-nose syndrome
  - Chronic wasting disease
  - Tularemia
  - Lyme disease

33. Night crawlers and wax worms are popular live baits used in Ohio. What larvae is used as live bait in Ohio and can be found under rocks in gravel bottomed quick moving streams and popular for smallmouth bass fishing?
- Maggots
  - Hellgrammites
  - Leeches
  - Crayfish
34. Explain the concept of "circular economy" in the context of sustainable energy.
- A closed-loop system for energy production
  - Maximizing energy efficiency in a linear economic model
  - Recycling used energy equipment
  - Reducing the overall energy consumption of an economy
35. How much money per year needs to be invested in renewable energy until 2030 to allow us to reach net-zero emissions by 2050.
- Between \$3.1 and \$5.8 trillion per year
  - Between \$3.1 and \$5.8 billion per year
  - Between \$8.4 and \$11.7 trillion per year
  - Between \$8.4 and \$11.7 billion per year
36. What is the role of energy storage technologies, such as batteries, in supporting renewable energy integration?
- To increase energy production from renewable sources
  - To store excess energy for use during periods of low renewable generation
  - To convert renewable energy into a more stable form
  - To reduce the need for renewable energy subsidies
37. How do microgrids contribute to the resilience and reliability of renewable energy systems?
- Reducing the efficiency of renewable energy sources
  - By isolating from the main grid during peak demand
  - By providing localized power generation and distribution
  - By relying solely on conventional energy sources
38. What is the concept of "community solar," and how does it differ from traditional solar installations?
- Solar panels installed in remote areas
  - Solar farms owned and shared by a community
  - A technique for harnessing solar energy in cold climates
  - Solar-powered community centers
39. Which renewable energy source is often associated with geothermal power plants?
- Biomass
  - Underground coal gasification
  - Tidal energy
  - Heat from the Earth's interior