

## **2018 Area 2 Envirothon: Current Environmental Issue- Western Rangeland Management**

1. Rangeland is predominately found in the western portions of the United States. Which of the following is the best description of rangeland?
  - A. Lands comprised of introduced or domesticated native forage species
  - B. Oak savanna mixture of trees and grass
  - C. Lands comprised of predominately native grasses, forbs, and shrubs**
  - D. Lands in which the primary purpose is for hunting
  
2. Native prairies once covered nearly a quarter of the United States, providing habitat for specifically adapted diverse plant and animal life. To maintain this habitat prairies rely upon intermittent disturbance. Which of the following were used during the 1800s to help maintain prairie ecosystems?
  - A. Frequent fire and periodic passing of native grazers.**
  - B. Periodic mowing and spot treatments.
  - C. Mechanical vegetation removal
  - D. Interseeding of native forbs
  
3. Pastureland is a common land use in Ohio. Which of the following is the best description of pastureland?
  - A. Native and indigenous grasses
  - B. Clover /timothy mix
  - C. Introduced or domesticated native forage species used for the production of livestock**
  - D. Land comprised of indigenous grasses, sedges, and forbs.
  
4. Which combination of plants is most commonly found in Ohio pastures?
  - A. Broom sedge & Buffelgrass
  - B. Big Bluestem & purple cone flower
  - C. Maize & Ryegrass
  - D. Tall Fescue & Red Clover**
  
5. The manipulation of animals to accomplish a desired result is commonly referred to as:
  - A. Result oriented management
  - B. Grazing management**
  - C. Managed manipulation
  - D. Specialized grazing

6. Rotational grazing has important environmental benefits. A key concept when using rotational grazing is:
- A. Move animals in a clockwise rotation
  - B. Manage for a predominate stand of grass
  - C. Allow for an adequate rest period between grazing intervals**
  - D. Fertilize the pasture adequately after moving the animals
7. Which of the following would not be considered an environmental benefit from grazing pastureland?
- A. Improved diversity and habitat
  - B. Improved distribution of manure nutrients
  - C. Reduced soil erosion
  - D. Improved monoculture**
8. Management intensive grazing (MIG) is a system that breaks larger fields into smaller units called paddocks. These smaller paddocks are grazed then rested before animals are allowed to graze again. Which of the following would be considered an advantage of managed intensive grazing?
- A. Highest forage production and use per acre
  - B. Weeds and brush are usually controlled naturally
  - C. More even distribution of manure
  - D. All of the above**
9. Livestock are attracted to areas along streams because they provide water, shade, and succulent forage. Uncontrolled livestock access to streams can cause environmental problems. Which best management practice would you recommend to reduce environmental concerns with livestock in streams.
- A. Grass Waterway
  - B. Vegetated buffer**
  - C. Spring
  - D. Erosion control matting

10. Of the earth's total land surface forty seven percent is classified as rangeland. The United States alone has almost one \_\_\_\_\_ acres of rangeland?

- A. thousand
- B. million
- C. billion**
- D. trillion

11. The planning process for sustaining healthy rangelands that support multiples uses is based upon six concepts. Which of the items below is not one of those concepts?

- A. Rangelands are renewable resources
- B. Rangelands produce a variety of products
- C. Rangelands must be managed to maintain soil and water quality
- D. Rangelands must be managed to achieve forage yield goals**

12. Rangelands are generally classified into three distinct hydrologic regimes and plant communities. Which of the items below is not a rangeland classification?

- A. Upland
- B. Riparian
- C. Wetland
- D. Woodland**

13. Which of the following is not a correct descriptor of Rangelands?

- A. Sparse vegetation
- B. Highly variable soils
- C. Unlimited precipitation**
- D. Frequent Salinity

14. Most management decisions on rangelands are made by first knowing the various plants inhabiting rangelands and knowing their growth habits. Which of the following plant type is not commonly found on rangeland?

- A. Grass-like
- B. Forbs
- C. Legumes**
- D. Shrubs

15. There are many ways to measure plants, there are only six basic attributes that are commonly measured for monitoring rangeland vegetation. Which of the following is not of the basic monitoring attribute?

- A. Structure
- B. Plant Species or Type
- C. Density
- D. Animal Unit Month**
- E. Frequency

16. Rangelands are incredibly dynamic ecosystems. There are five major factors that cause rangelands to change over time. Which of the following is not a factor?

- A. Grazing
- B. Fire
- C. Soil quality**
- D. Weather and climate
- E. Invasive plants

17. Animals that live on rangeland can be categorized based on their foraging habits. Following are the three common classifications of rangeland animals. Which classification do Bears belong to?

- A. Herbivores
- B. Carnivores
- C. Omnivores**
- D. Insectivores

18. A.W. Kuchler an American geographer and naturalist is recognized as having produced one of the first reliable vegetation maps in the United States. The rangelands of the continental United States consist of five rangeland regions with each having characteristic vegetation adapted to its unique combination of climate and soils. Which option is not one of these regions?

- A. Western Upland**
- B. Mediterranean
- C. Great Basin
- D. Pacific Northwest

19. Historically, the primary function of rangelands has been forage for livestock and wildlife. Rangelands provide a number of social, ecological and economic values. In a study conducted by the Social Science Research Unit (SSRU) at the University of Idaho which activity received the highest level of public approval?

- A. Livestock grazing
- B. Hiking/camping**
- C. Hunting & fishing
- D. ATV/motorized vehicles

20. Habitat is made up of four components: food, water, space and cover. Due to the diversity of habitat present on rangelands a variety of both domestic and non-domestic animals may share the same area. Which term is given to the relationship between these species when one benefits at the expense of the other?

- A. Amensalism
- B. Antagonism**
- C. Commensalism
- D. Mutualism

21. Fossil records indicate ungulates roamed and grazed western North America for several million years. Because these rangeland plants evolved with grazing the effects can be beneficial or detrimental. Which of these factors below has the least effect on plant growth after grazing?

- A. Plant species
- B. Time of grazing
- C. Grazing intensity
- D. Animal species**

22. The number of acres burned by wildfires has been increasing since the mid 1960's. Generally, low intensity fires increase plant productivity and high intensity fires result in decreased productivity and plant diversity. Which of these choices is not a method of reducing the fire fuel load in a given area?

- A. Grazing
- B. Prescribed fire
- C. Fragmentation**
- D. Timber harvesting

23. Research has shown that presence of grazing livestock can actually be a benefit to riparian areas if properly managed. In a prescribed grazing system which best management practice (BMP) should be used when grazing a riparian area?

- A. Rotational grazing
- B. Installing controlled stream crossings
- C. Proper stocking rate
- D. **Flash grazing**

24. As land managers, it is important to control stocking rates on rangeland. Which factors would a manager consider when determining the stocking rate for a pasture?

- A. Condition of animals (pregnant, lactating, etc.)
- B. Animal unit
- C. Amount of dry matter (DM) per acre
- D. **All of the above**

25. Cattle take grass into their mouth by \_\_\_\_\_?

- A. biting it with top and bottom teeth
- B. pinching the grass in between their cheek & gum
- C. **pulling the grass into their mouth with their tongue**
- D. grinding the grass with their molar teeth