

## 2026 Ag Bowl Forestry Exam

True or False:

A ☒ B A red pine stand with a basal area of 20 square feet per acre should be thinned to improve growing conditions for the remaining trees.

A ☒ B Maintaining vegetative diversity is key to attracting a variety and abundance of wildlife to a woodland.

A ☒ B The chain brake should be set when starting a chainsaw.

A ☒ B Logs are scaled to determine the scale (volume) and quality of harvested logs, so a buyer knows what is being sold and the purchaser knows what they are buying. When scaling logs for lumber production, the length of the log and the average diameter inside the bark on the small end of the log are evaluated.

A ☒ B Defects such as burls, limbs, or insect holes will not affect the total volume of usable wood but will reduce wood quality or grade.

A ☒ B A clearcut is an option for an immediate harvest.

A ☒ B Boxelder is a type of Oak

A ☒ B The purpose of kiln-drying wood is to reach the wood's equilibrium moisture content, a balance between the moisture content of the wood and the relative humidity of its surrounding environment.

A ☒ B Pine forests are the most common grouse habitat.

A ☒ B Gypsy moths only attack ash trees.

Multiple choice

11. Which of the following is not correct?

- A. Acre equals 43,560 square feet
- ☒ B. Hectare equals 1,000 square meters
- C. Acre equals 100 square meters
- D. Hectare equals 2.471 acres

12. Which of the following is a survey line that runs east-west?

- ☒ A. Principal Meridian
- B. Guide Meridian
- C. Section
- D. Baseline

13. Which tool is used to measure boundaries on scale maps to determine land area?

- A. Dot Grid

- ☒ B. Planimeter
- C. Survey Instrument
- D. Stereoscope

14. What are current tree felling wedges made of?

- A. Steel, plastic
- ☒ B. Plastic, aluminum
- C. Wood, aluminum
- D. Steel, wood

15. The strength of wood along the long axis of a tree is called:

- A. Ductile strength
- B. Density
- C. Toughness
- ☒ D. Tensile strength

16. The \_\_\_\_\_ is a cell structure that contains materials capable of capturing

energy from the sun as the plant produces sugars and starches.

- A. Protoplasm
- B. Cytoplasm
- ☒ C. Chloroplast
- D. Vacuole

17. The first cut on each of the four sides of a log removes an exterior piece of wood called a \_\_\_\_\_.

- A. Plank
- B. Cant
- C. Beam
- ☒ D. Slab

18. Which of the following is not a component related to Geographic Information Systems (GIS)?

- A. Satellite
- B. Computer
- C. GPS Receiver
- ☒ D. All of the above are related to GIS

19. Which of the following is not considered an alternative enterprise for forest landowners.

- A. Firewood
- ☒ B. Plywood and OSB
- C. Decorative or specialty wood products
- D. Seed cone production

20. Hickory trees have \_\_\_\_\_ compound leaves, where the leaflets are laterally attached along each side of the rachis, or stalk.

- A. Palmately
- B. Alternately
- C. Bipinnately
- D. Pinnately**

21. All of the following instruments can be used to measure tree height except:

- A. Biltmore/scale stick
- B. Clinometer
- C. Relaskop
- D. Wheeler Caliper**

22. How many square feet are in 2 acres?

- A. 25,000
- B. 152,460
- C. 87,120**
- D. 108,900

23. When \_\_\_\_\_ occurs the seed breaks dormancy and begins to sprout.

- A. Fertilization
- B. Pollination
- C. Germination**
- D. Asexual Reproduction

24. How many square feet are in an acre?

- A. 43,560**
- B. 6,230
- C. 56
- D. 30

25. Which of the following tree species does not have compound leaves?

- A. Basswood**
- B. Ash
- C. Boxelder
- D. Butternut

26. Which of the following tree species has a simple leaf?

- A. Hackberry**
- B. Green Ash
- C. Black Walnut
- D. Butternut

27. What is the new name for the gypsy moth, which predated on leaves of oaks, elms, and maples?

- A. Gray moth
- B. Brown moth
- C. Hairy moth
- D. Spongy moth**

28. What do closely spaced annual growth rings represent?

- A. Short growth
- B. Slow growth**
- C. Tall growth
- D. Fast growth

29. What is the name of the term which refers to the stem or stalk of a leaf?

- A. Serrate
- B. Margin
- C. Petiole**
- D. Base

30. Planting stock with the designation 2-1 indicates which of the following?

- A. The seedlings are 1 year old
- B. The seedlings are 2 feet and 1 inch tall
- C. The seedlings have been grown for 2 years in a nursery seedling bed and one year in a transplant bed**
- D. The seedlings have been grown for 2 years in a transplant bed and one year in a nursery seedling bed

31. Fiber length is an important property of pulp fibers used in the manufacture of paper. As fiber length increases, which of the following is true?

- A. Bursting strength and print quality increase
- B. Bursting strength and print quality decrease
- C. Folding endurance and tearing resistance decrease
- D. Folding endurance and tearing resistance increase**

32. What is the alternate host for white pine blister rust?

- A. Eastern red cedar
- B. Soybeans
- C. Aspen
- D. Gooseberries and currant**

33. Juglone, a naturally occurring organic compound that is toxic or growth-stunting to some plants, is associated with which of the following species?

- A. Eastern red cedar
- B. Spruce
- C. Black walnut**
- D. Sugar maple

34. Which of the following is not a standard hardwood lumber grade?
- A. select
  - B. FAS
  - C. 2b common
  - D. 4a common**
35. One hectare of land equals approximately \_\_\_\_\_ acres.
- A. 5.2
  - B. 3
  - C. 2.5**
  - D. 0.6
36. Which of the following is a possible effect of forestry practices on soil?
- A. Erosion
  - B. Compaction
  - C. Nutrient loss
  - D. All of the above**
37. What is the state tree of Minnesota?
- A. Norway pine**
  - B. White pine
  - C. Blue spruce
  - D. Norway spruce
38. From a silvicultural standpoint, the harvesting of aspen is best done using the \_\_\_\_\_ system.
- A. Clearcutting**
  - B. Seed tree
  - C. Group selection
  - D. Shelterwood
39. Which of the following is not one of the basic chemical constituents of wood?
- A. Lignin
  - B. Cellulose
  - C. Cellulite**
  - D. Hemicellulose
40. What is the actual size (thickness and width) of a 2" x 10", dry, surfaced piece of dimension lumber?
- A. 2" x 10"
  - B. 1 ½" x 9 ½"**
  - C. 1 ¼" x 9 ¼"

D.  $1\frac{1}{2}$ " x  $9\frac{3}{4}$

41. Which of the following would you use an increment borer to measure?

- ☒ A. Tree age
- ☐ B. Basal area
- ☐ C. D.B.H.
- ☐ D. Merchantable height

42. A fungus condition, which may cause death or damage to newly emerging seedlings, is called:

- ☐ A. Ground rot
- ☒ B. Damping off
- ☐ C. Mulching
- ☐ D. Heart rot

43. You have 537 trees to plant in an acre. Which of the following average spacings should you use?

- ☐ A. 7 feet x 7 feet
- ☐ B. 8 feet x 8 feet
- ☒ C. 9 feet x 9 feet
- ☐ D. 10 feet x 10 feet

44. Berry, drupe and pome are types of \_\_\_\_\_

- ☒ A. Fleshy fruits
- ☐ B. Dry fruits
- ☐ C. Aggregate fruit
- ☐ D. Multiple fruit

45. \_\_\_\_\_ is the productive capacity of a site for a given species.

- ☐ A. Site preparation
- ☐ B. Silviculture
- ☐ C. Site capacity
- ☒ D. Site index

46. What is the width of a cut made by a saw?

- ☒ A. Kerf
- ☐ B. Notch
- ☐ C. Cant
- ☐ D. Gap

47. The vertical wood surface that is exposed when a block of wood is split in half is the \_\_\_\_\_ surface.

- ☐ A. Tangential
- ☒ B. Radial
- ☐ C. Transverse

D. Cross-sectional

48. When planting a farmstead shelterbelt, trees should be planted:

- A. Not more than 20 feet from any building
- B. Only on the south sides of buildings
- C. At least 100 feet from any building**
- D. At least  $\frac{3}{4}$  mile from any building

49. The scientific name for butternut is *Juglans cinerea* identifies the \_\_\_\_\_.

- A. Species**
- B. Order
- C. Genus
- D. Family

50. What does the contour interval on a topographic map indicate?

- A. Different types of contour lines
- B. Difference in elevation represented by adjoining contour lines**
- C. Elevation at a specific point
- D. Elevation of a general area

Tree ID



Northern Red Oak



Paper Birch



Silver Maple



Jack Pine





Scotch Pine



White Spruce





Slippery Elm



Bur Oak

Bigtooth Aspen





Balsam Fir



Butternut

White Ash



Willow



Black Cherry



Norway Spruce



Hickory



American Elm



Black Spruce





Red Maple

HackBerry



Cottonwood







Colorado (Blue) Spruce



Boxelder



Honey Locust



Sugar Maple



Tool ID  
Bow Saw



Planimeter





Tree Caliper



Increment Borer

Logger's Tape



Drip Torch



Fire Rake



Pruning Saw



Hooker



Canhook



### Wood ID

1.
  - A. Basswood
  - B. Hackberry
  - C. Sugar Maple
  - D. White oak
2.
  - A. Black Walnut
  - B. Cottonwood
  - C. Spruce
  - D. White Pine
3.
  - A. Elm
  - B. Northern Red Oak
  - C. Ash
  - D. Aspen
4.
  - A. Douglas-Fir
  - B. Eastern Red Cedar
  - C. Red (Norway) Pine
  - D. Tamarack
5.
  - A. Cherry
  - B. Hickory
  - C. Butternut
  - D. Ponderosa Pine
6.
  - A. White Pine
  - B. Cottonwood
  - C. Aspen
  - D. Sugar Maple
7.
  - A. Cherry
  - B. Elm
  - C. Ash
  - D. Eastern Red Cedar
8.
  - A. Spruce

- B. White Pine
  - C. Basswood
  - D. Cherry
- 9.
  - A. Sugar Maple
  - B. White Oak
  - C. Northern Red Oak
  - D. Elm
- 10.
  - A. Black Walnut
  - B. Eastern Red Cedar
  - C. Hackberry
  - D. Cherry