



NATIONAL FFA FORESTRY CAREER DEVELOPMENT EVENT

Exam

1. 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

2. If the circumference of a tree at DBH is 47 inches, what is the diameter?
 - A. 147
 - B. 15
 - C. .067
 - D. 50

3. Aerial fuel is located more than _____ feet above the ground in the mid to upper canopy of the forest.
 - A. Six
 - B. Eight
 - C. Nine
 - D. Twelve

4. A pulping process in which wood fibers are separated by dissolving the lignin that cements them together is called:
 - A. Hydrapulping
 - B. Chemical pulping
 - C. Mechanical pulping
 - D. Disk refining

5. Which of the following is a survey line that runs east-west?
 - A. Principal Meridian
 - B. Guide Meridian
 - C. Section
 - D. Baseline
6. Which of the following products does not come from cellulose xanthate?
 - A. Rosin
 - B. Photographic film
 - C. Cellophane
 - D. Rayon
7. The population of plants that occupies an environment when the succession of plant species is complete and the plant population has stabilized is known as a:
 - A. Boreal forest
 - B. Pioneer species
 - C. Climax community
 - D. Terminal forest
8. Which of the following is not one of the basic tissues systems of a plant?
 - A. Vascular tissue
 - B. Ground tissue
 - C. Dermal tissue
 - D. Nucleoplasm
9. Which tool is used to measure boundaries on scale maps to determine land area?
 - A. Dot Grid
 - B. Planimeter
 - C. Survey Instrument
 - D. Stereoscope

10. Dehydration synthesis is a plant process that is responsible for the formation of:
- A. Glucose
 - B. Starch
 - C. Cellulose
 - D. Chloroplast
11. What are current tree felling wedges made of?
- A. Steel, plastic
 - B. Plastic, aluminum
 - C. Wood, aluminum
 - D. Steel, wood
12. What method of forest regeneration relies on stump sprouts from harvested trees?
- A. Stock Grafting Method
 - B. Seed Tree Method
 - C. Coppice Method
 - D. Shelterwood Method
13. Which of the following is an example of a commensalism relationship between organisms?
- A. Mistletoe growing on a tree limb
 - B. Birds cache pine seeds for later use and a seed sprouts as a seedling
 - C. Kudzu growing on a pine tree
 - D. Spanish moss growing in the canopy of a tree
14. Annually, _____ is the highest consumer of sawn wood.
- A. China
 - B. United States of America
 - C. German
 - D. Italy

15. Which statement is true?
- A. Softwood has a rough wood texture
 - B. Softwood is porous due to the presence of vessels
 - C. Tracheid content in softwood is 90% to 95%
 - D. Softwood comes from angiosperm, deciduous trees
16. The strength of wood along the long axis of a tree is called:
- A. Ductile strength
 - B. Density
 - C. Toughness
 - D. Tensile strength
17. The intent of the _____ was to establish forests on 40 acres of each 160-acre homestead in the Great Plains region.
- A. Homestead Act of 1862
 - B. Timber Culture Act of 1873
 - C. Twenty-Five Percent Fund Act of 1908
 - D. Forest Reserve Act of 1891
18. A tensiometer is an instrument that is used to:
- A. Measure the water content of soil
 - B. Calculate the strength of a tree
 - C. Measure the purity of irrigation water by testing the surface tension of water
 - D. Estimate the flexibility of tree limbs
19. 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

20. Fruit structures for elm, ash, and maple are known as Samara. Samara are _____.

- A. Dehiscent
- B. Indehiscent
- C. Aggregate
- D. Multiple

21. Which weather condition would be of greatest concern when felling a tree?

- A. Wind
- B. Temperature
- C. Humidity
- D. None of the above

22. A saw that makes two or more cuts at the same time is called a:

- A. Band Saw
- B. Head Rig
- C. Circular Saw
- D. Gang Saw

23. Which of the following is NOT a basic assumption applied to partial cruises to ensure the accuracy of the results.

- A. Teams of two cruisers work together, one taking measurements, one recording the data.
- B. The sample must be representative of the entire forest.
- C. Enough samples should be tallied to reduce the chance that errors will occur.
- D. The plot size should be large enough to tally 15-20 trees per acre.

24. Trees that produce seeds inside an ovary or fruit are called:

- A. Angiosperms
- B. Gymnosperms
- C. Monoecious
- D. Dioecious

25. Which soil horizon, commonly referred to as topsoil, contains a mixture of humus and mineral soil?
- A. O
 - B. A
 - C. E
 - D. B
26. Integrated Pest Management (IPM) utilizes which of the following control methods?
- A. Chemical control
 - B. Mechanical control
 - C. Biological control
 - D. All of the above
27. 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
28. _____ is the scientific care of shrubs and trees in cities and towns.
- A. Silviculture
 - B. Arboriculture
 - C. Horticulture
 - D. Pomiculture
29. 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

30. Which of the following careers would most likely require individuals to have an advanced degree, such as a master or doctorate?
- A. Urban Forester
 - B. Forest Technician
 - C. Land Surveyor
 - D. Research Scientist
31. As part of the 1933 “New Deal”, the Civilian Conservation Corps (CCC) was created to plant trees, install erosion control structures, and build recreational campgrounds under the administration of what US President?
- A. Herbert Hoover
 - B. Franklin D. Roosevelt
 - C. Theodore Roosevelt
 - D. Dwight D. Eisenhower
32. 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
33. The _____ layer of the forest is made up of the tallest trees that rise above all others.
- A. Emergent
 - B. Canopy
 - C. Understory
 - D. Forest Floor

34. Filter strips are areas of undisturbed vegetation that are left between a harvest site and a body of water. Which factor likely has the greatest effect on determining the width of the filter strip left in place following a logging operation?
- A. Type of harvest operation performed
 - B. Size of the body of water nearby
 - C. Slope of the land adjacent to the body of water
 - D. Species of trees present in the filter strip
35. Hickory (*Carya* sp.) 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
36. The western red cedar (*Thuja plicata*) has a _____ leaf shape.
- A. Ovate
 - B. Elliptical
 - C. Lanceolate
 - D. Scale-like
37. Achene fruit consists of a single, hairy seed that can be easily carried by wind. An example of a tree species with this fruit structure is:
- A. Red Maple (*Acer rubrum*)
 - B. Sycamore (*Platanus* sp.)
 - C. Pecan (*Carya illinoensis*)
 - D. Black Cherry (*Prunus serotina*)
38. All of the following instruments can be used to measure tree height except:
- A. Biltmore/scale stick
 - B. Clinometer
 - C. Relaskop
 - D. Wheeler Caliper

39. Which of the following insect species is not considered a defoliator?
- A. Douglas fir tussock moth
 - B. Gypsy moth
 - C. Cicada
 - D. Spruce budworm
40. What is the correct order?
- A. Class, Genus, Species, Order
 - B. Order, Family, Genus, Species
 - C. Order, Species, Genus, Class
 - D. Family, Genus, Species, Kingdom
41. If you are traveling an azimuth of 215, you are headed in a _____ direction.
- A. Northwest
 - B. Northeast
 - C. Southeast
 - D. Southwest
42. The tree tissue responsible for transporting food made in the leaves to the roots is called:
- A. Xylem
 - B. Cambium
 - C. Bark
 - D. Phloem
43. A block of wood 6 inches thick by 4 inches wide and 12 inches long contains ____ board feet of wood volume.
- A. One
 - B. Two
 - C. Three
 - D. Four

44. Assume that a cord of firewood costs \$150, how much would a stack of wood measuring 4' x 4' x 24' cost?
- A. \$75
 - B. \$150
 - C. \$300
 - D. \$450
45. The degree of acidity or alkalinity of a soil is expressed in pH values. Which of the following pH values is most alkaline?
- A. 8.5
 - B. 7.0
 - C. 5.5
 - D. 4.0
46. What is the form class of a tree 18 inches in DBH and 14.4 inches in diameter inside bark at the top of the first 16-foot log?
- A. 75
 - B. .075
 - C. 80
 - D. .80
47. How many square feet are in 3.5 acres?
- A. 25,000
 - B. 152,460
 - C. 187,120
 - D. 108,900
48. The process of consuming carbohydrates and oxygen to obtain energy for the biological processes of life support, growth, and reproduction is called _____.
- A. Photosynthesis
 - B. Respiration
 - C. Transpiration
 - D. Oxidation

49. _____ rule assumes 1-inch boards and $\frac{1}{4}$ inch kerf, makes a liberal allowance for slabs, and disregards taper.
- A. Scribner Rule
 - B. International Rule
 - C. Doyle-Scribner Rule
 - D. Doyle Rule
50. When _____ occurs the seed breaks dormancy and begins to sprout.
- A. Fertilization
 - B. Pollination
 - C. Germination
 - D. Asexual Reproduction