

2015 National FFA Forestry Career Development Exam

Directions: Select the best answer and bubble it in on the answer sheet provided. You may write on the test booklet, if needed.

1. The first plants to grow naturally in a burned or cleared area are called _____.
 - a. Softwoods
 - b. Pioneers
 - c. Hardwoods
 - d. Succession
2. Management of forests and their environments for the commercial production and harvest of trees for lumber and other wood products is called _____.
 - a. Silviculture
 - b. Reforestation
 - c. Horticulture
 - d. Forest regeneration
3. Which of the following is not a needle-leave shape?
 - a. Flat
 - b. Four-angled
 - c. Three-angled
 - d. Cylindrical
4. When the attachment of the leaflets is at the end of the leafstalk, the leaf is _____.
 - a. Palmately Compound
 - b. Pinnately Compound
 - c. Bipinnately Compound
 - d. All of the above
5. 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
6. _____ are long, tapered cells that have pits in their cell walls through which water is able to flow from one cell to another.
 - a. Paranchyma
 - b. Collenchyma
 - c. Tracheids
 - d. Pholem

7. _____ develop long, thin, threadlike projections called root hairs that extend out into the soil.
- Endodermis cells
 - Parenchyma cells
 - Cambium cells
 - Epidermal cells
8. Which of the following does not constitute a flower's pistil?
- Stigma
 - Anther
 - Style
 - Ovary
9. _____ is a waste product from the photosynthesis process.
- Oxygen
 - Carbon Dioxide
 - Water
 - Glucose
10. The first stage of active cell reproduction is known as _____.
- Interphase
 - Metaphase
 - Prophase
 - Anaphase
11. The phase of photosynthesis during which carbon dioxide reacts with ATP and NADPH forming simple sugars is:
- Respiration
 - Dehydration Synthesis
 - Light Reactions
 - Calvin cycle
12. The _____ horizon is where most of the organic matter in the form of humus is added to the soil profile.
- O
 - A
 - E
 - C
13. Which of the following is a primary consumer?
- Great Horned Owl
 - Whitetail Deer
 - Canada Lynx
 - Red-tailed Hawk

14. A soil order that is high in concentrations of calcium, magnesium, sodium, and potassium is:
- Alfisol
 - Ultisol
 - Spodosol
 - Humus
15. Which of the following is not a biotic disease?
- Drought conditions
 - Temperature extremes
 - Acid precipitation
 - Fungi
16. Some plants release chemicals into the area close around them that provide small doses of poison to young plants that invade their territory. This defensive plant response is known as:
- Allelopathic Effect
 - Germicide
 - Herbicide
 - Chemical Warfare
17. Lines that run north-south in a rectangular survey system are considered to be known as:
- Baselines
 - Principal meridians
 - Standard parallel
 - Base meridians
18. Which log scale system accounts the amount of wood in the taper of the log from the small end to the large end?
- Scribner
 - Doyle
 - Scribner Decimal C
 - International Log Rule
19. How many cords of firewood are there in a stack of wood 14' long, 4' high, and 4' wide?
- 1.5 cords
 - 1.75 cords
 - 2 cords
 - 2.25 cords
20. A partially decayed fuel that is found on the forest floor is called:
- Duff
 - Charcoal
 - Peat
 - Litter

21. Hardwoods are _____ in density than softwoods due to the amount of cell wall material in a given volume of wood.
- Lesser
 - Higher
 - Identical
 - None of the above
22. The first cut on each of the four sides of a log removes an exterior piece of wood called a _____.
- Cant
 - Debarking
 - Slab
 - Plank
23. A _____ is a piece of wood that measures $1\frac{7}{8}$ – 4” in thickness and greater than 11” in width.
- Lumber
 - Board
 - Plank
 - Beam
24. The strength of wood along the long axis of a tree is called:
- Toughness
 - Density
 - Ductile strength
 - Tensile strength
25. Which state established the first forestry agency in the United States on March 3, 1885?
- California
 - Colorado
 - Ohio
 - New York
26. A monocot has _____ cotyledon(s).
- One
 - Two
 - Three
 - None
27. Fruit structures for elm, ash, and maple are known as Samara. Samara are _____.
- Dehiscent
 - Indehiscent
 - Aggregate
 - Multiple

28. Which tree species has blossoms that appear after the leaves?
- Dogwood
 - Ash
 - Elm
 - Cottonwood
29. The total tree environment involves a very complex interaction between a variety of physical and biological factors. Which of the following is not a physical factor?
- Climate
 - Pyric Activity
 - Soil
 - Fungi
30. _____ is the most important commercial tree species in the United States. It grows in nearly all western states, from the Rocky Mountains to the Pacific Coast.
- Red Alder
 - Bigtooth Aspen
 - Yellow Pine
 - Douglas-Fir
31. Which of the following is not a characteristic of ecosystems?
- Stratification
 - Zonation
 - Diversity
 - Succession
32. On deciduous trees, _____ is the most important identification feature in the dormant winter period.
- Twigs
 - Bark
 - Fruit
 - Leaves
33. What are four types of roots in a complete root system?
- Tap root, lateral roots, fibrous roots, root hairs
 - Tap root, lateral roots, fibrous roots, deeply descending roots
 - Tap root, lateral roots, deeply descending roots, cambium
 - Root cap, lateral roots, fibrous roots, deeply descending roots
34. Which is not part of the fire triangle?
- Hydrogen
 - Fuel
 - Heat
 - Oxygen

35. The basal area per acre is _____ if one has tallied 7 trees with a 10 factor prism.
- 7 sq. ft
 - 70 sq. inches
 - 700 sq. ft
 - 70 sq. ft
36. Which statement is true about carrying a chainsaw?
- Engine stopped, brake engaged, guide bar/chain to the front
 - Engine stopped, guide bar/chain to the rear, muffler away from body
 - Engine stopped, brake engaged, guide bar/chain to the rear, muffler away from body
 - None of the above
37. In an all-aged forest, the dominant trees may damage the growth of the overall stand. Removal of dominant trees to maximize timber volume produced is called _____.
- Liberation
 - Sanitation Cutting
 - Thinning
 - Salvage Cutting
38. John's step factor is 2.75 feet. How many steps does John take to measure the distance of one chain?
- 22 steps
 - 23 steps
 - 24 steps
 - Not enough information
39. Ferns and grasses generally represent which of the following strata in a forest?
- Canopy
 - Herb layer
 - Understory
 - Shrub layer
40. Electricity that is produced using harvested plant materials as fuel to produce heat is called:
- Induced power
 - Nuclear power
 - Biomass power
 - Hydropower
41. A plant structure that transports dissolved materials across the wood section of a stem is called:
- Apical meristem
 - Pith
 - Sieve tube
 - Vascular ray

42. A leaf margin with sharp teeth pointing outward is:
- Dentate
 - Crenate
 - Serrate
 - Revolute
43. The scientific name for Eastern Hemlock is....
- Juglans nigra*
 - Pinus taeda*
 - Tsuga Canadensis*
 - Acer rubrum*
44. Which of the following states does not have a tropical forest region?
- Arizona
 - Florida
 - California
 - Utah
45. If a foresight bearing reading is N56E, what would be the backsight bearing?
- N56E
 - S58E
 - S58W
 - N58W
46. Specific gravity of wood is largely influenced by...
- Amount of gum in the wood
 - Size of the wood's cell cavities
 - Thickness of the wood's cell walls
 - All of the above
47. _____ is cut parallel to the radius of the log.
- Endgrain-sawn wood
 - Quarter-sawn wood
 - Plain-sawn wood
 - None of the above
48. Which of the following is not an important factor affecting felling and cutting-to-length outputs?
- Volume per acre and size of timber to be cut
 - Amount of defect in the timber
 - Season of the year.
 - Type of forest soil

49. Which of the following is not a common wood preservative?
- a. Chromated Cooper Arsenate Type I
 - b. Creosote, coal-tar
 - c. Copper naphthenate
 - d. Acid zinc arsenate
50. _____ cause abnormal tissue growths on any part of a plant.
- a. Borers
 - b. Leaf feeders
 - c. Gall insects and mites
 - d. Plant-sucking insects

2015 National FFA Forestry Career Development Exam – Answer Key

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|-------|-------|
| 1. B | 26. A |
| 2. A | 27. B |
| 3. D | 28. A |
| 4. A | 29. D |
| 5. C | 30. D |
| 6. C | 31. D |
| 7. D | 32. B |
| 8. B | 33. B |
| 9. A | 34. A |
| 10. C | 35. D |
| 11. D | 36. C |
| 12. A | 37. A |
| 13. B | 38. C |
| 14. A | 39. B |
| 15. D | 40. C |
| 16. A | 41. D |
| 17. B | 42. A |
| 18. D | 43. C |
| 19. B | 44. D |
| 20. A | 45. C |
| 21. B | 46. D |
| 22. C | 47. B |
| 23. C | 48. D |
| 24. D | 49. D |
| 25. A | 50. C |