

2022 National FFA Forestry CDE Knowledge Exam B

1. Pick the correct definition of habitat structure?
 - a. Characteristics of the natural environment such as sunlight, temperature, moisture, and wind
 - b. Physical characteristics of the natural environment, such as how many trees there are, how tall they are, and what species they are
 - c. The shrubs, young trees, and plants near the forest floor
 - d. Animal or plant species that live in areas that have just had a large disturbance that removed much of the canopy, such as an extreme weather event like a windstorm or a clear-cut timber harvest
2. What job title is being described?
A(n) _____ Samples water from a stream to make sure that it is safe.
 - a. Volunteer
 - b. Naturalist
 - c. Ecologist
 - d. Logger
3. What word matches this definition?
The amount of sky obscured by the leaves and branches of the top layer of trees in the forest, measured as a percent.
 - a. Clear cut
 - b. Early successional
 - c. Ground cover
 - d. Canopy cover
4. The trunk of a tree is considered which of the following?
 - a. Internode
 - b. Bole
 - c. Crown
 - d. Root
5. Which of the following is false about cambium cells?
 - a. Cambium cells live between wood and bark cells and are visible only with a magnifying glass
 - b. Cambium growth widens tree trunks, limbs, and roots
 - c. Cambium cells divide forming wood cells toward the center of the tree and bark cells toward the outside
 - d. Cambium cells carry food made in the leaves to the twigs, branches, trunk, and roots
6. Which of the following is not an artificial reproductive method?
 - a. Pruning
 - b. Budding and Grafting
 - c. Cuttings
 - d. All of the above are artificial reproductive methods
7. Oxygenic photosynthesis occurs in the _____ located in the plant cell and absorbs blue and red wavelengths of lights.
 - a. Mitochondrion
 - b. Golgi Apparatus
 - c. Nucleus
 - d. Chloroplast

8. Axial parenchyma cells originate from the _____ forming a network of living cells around the tree. They transport sugars (food) to the parenchyma cells within the growth ring, and they store starch.
- Heartwood
 - Cambium
 - Sapwood
 - Seriate
9. A leaf _____ is the space or indentation between the lobes of a leaf blade.
- Sinus
 - Margin
 - Apex
 - Midrib
10. Which species of wood can be used to produce ax handles?
- Sycamore
 - White Birch
 - Bald Cypress
 - Hickory
11. Which of the following statements is not true about monocots?
- Monocot seeds have one cotyledon.
 - Monocot flower parts come in multiples of 4 and 5.
 - Monocot leaves have parallel venation.
 - Monocots have scattered vascular bundles in the stem.
12. Which of the following is an accurate portrayal of the stages of succession?
- Annual weeds, perennials, shrubs, young trees
 - Annual weeds, shrubs, perennials, young trees
 - Annual weeds, young trees, shrubs, perennials
 - Perennials, annual weeds, shrubs, young trees
13. Which is NOT a function of those plants growing next to the stream in a riparian forest buffer?
- Slow surface water runoff from farm fields converting concentrated flow to sheet flow.
 - Reduce velocity of over-the-bank floodwaters.
 - Shade the stream and moderate water temperatures.
 - Storage and breakdown of NPS pollutants.
14. Which rule for scaling logs takes into account the amount of wood in the taper of the log from the small end to the large end?
- Scribner
 - Doyle
 - International
 - None of them
15. _____ is an obligate parasite, and while trees usually do not die from the infestation, their growth is restricted.
- Slime Flux
 - Rust
 - Nematode
 - Heart Rot

16. A _____ is formed through meiosis consisting of one chromatid from each original chromosome pair.
- Haploid cell
 - Diploid cell
 - Tetrad cell
 - Mother cell
17. Which of the following does not influence the color of soil?
- Amount of organic matter
 - Drainage of the soil
 - Minerals in the soil
 - Amount of silt
18. _____ include damage caused to trees by conditions such as drought, heat, cold and other conditions, they are not contagious, but they may affect a large number of trees in an area.
- Abiotic diseases
 - Biotic diseases
 - Fungus
 - Parasites
19. When felling a tree with a chainsaw the backcut _____.
- is placed below the undercut
 - should be placed on the same level as the undercut
 - should be level with the bottom of the open face notch
 - should cut straight through the notch
20. How many square feet are in 5.5 acres?
- 425,000
 - 243,560
 - 187,120
 - 239,580
21. Mr. Fletcher plans to plant 50 acres of Longleaf Pine seedlings on 8 feet x 10 feet intervals. How many seedlings per acre will Mr. Fletcher plant?
- 96
 - 432
 - 454
 - 545
22. If the male and female flower parts occur in separate flowers on the same tree, the species is said to be _____.
- | | |
|---------------|----------------|
| a. Dioecious | c. Carpellate |
| b. Monoecious | d. Angiosperms |
23. What is the form class of a tree 24 inches in dbh and 18 inches in diameter inside bark at the top of the first 16-foot log?
- 75
 - .075
 - 1.33
 - 133

24. Length of darkness influences plant growth. This is known as _____.
a. Geotropism
b. Thermotropism
c. Photoperiodism
d. Light Intensity
25. For which of the following would an insecticide be used?
a. Aphid
b. Slime Flux
c. Heart Rot
d. Nematode
26. In the rectangular survey system developed by Thomas Jefferson, _____ run north to south.
a. Principal Meridians
b. Primary Meridians
c. Secondary Meridians
d. Guide Meridians
27. How many board feet are present in 20 boards $5/4$ inches thick, 12 inches wide, and 144 inches long?
a. 24
b. 300
c. 3600
d. 240
28. _____ is a lengthwise separation of the wood, which usually extends across the rings of annual growth, commonly resulting from stresses set up in wood during seasoning.
a. Cant
b. Catface
c. Check
d. Conk
29. You tally 8 trees using a 10 factor wedge prism within a plot. What is the basal area in square feet per acre of the trees around that point?
a. 0.8
b. 8
c. 80
d. 10
30. If $\text{Area} = \pi \times \text{radius}^2$, then what is the plot radius for $1/10$ acre?
a. 37.25 feet
b. 52.6 feet
c. 58.9 feet
d. 66 feet
31. Which species and bark type is incorrect?
a. American Beech – Smooth
b. Eastern White Pine – Scaly
c. Hickory – Warty
d. Black Oak – Furrowed

32. Assume that a cord of firewood costs \$150, how much would a stack of wood measuring 4' x 4' x 14' cost?
- \$75
 - \$150
 - \$263
 - \$450
33. The best planting method for waterlogged soils is
- Pit planting
 - Mound planting
 - Berm planting
 - Dibble planting
34. Opposite of succession is called:
- Secondary succession
 - Tertiary succession
 - Retention
 - Retrogression
35. Which of the following is the correct way to write a legal description of a land Parcel:
- S 16, T4N, R2E, NE 1/4 of SE 1/4
 - R2E, S16, T4N, NW 1/4 of SW 1/4
 - NW 1/4 of SW 1/4, S16, T4N, R2E
 - NE 1/4 of Se 1/4, R2E, T4N, S16
36. A method of natural control of forest insect pests include(s):
- allowing predators of the insect to control them
 - logging the infested tree
 - spraying with insecticide after the trees are felled
 - none of the above
37. The distinctive feature of topographic maps is the _____.
- location of forest land
 - location of landmarks
 - location of roads and waterways
 - shape or contour of the land
38. The use of a counter (back) fire is what type of forest fire control?
- Direct
 - Indirect
 - Prescribed
 - Triangulation
39. The decline in value of a fixed asset due to wear and tear from use is called:
- Declination
 - Depletion
 - Depreciation
 - Diminishing returns
40. On a topographic map which of the following is a dark, heavy line with an elevation figure?
- contour index
 - contour interval
 - contour line
 - horizontal control station

41. An azimuth reading of 196 degrees would convert to a bearing of _____.
a. 96 degrees south
b. 196 degrees SW
c. S 16 degrees W
d. 16 degrees SW
42. Merchantable height is that height from the stump to _____.
a. a specified minimum top diameter
b. half-way between the first branch and the top of the tree
c. that point which is $\frac{2}{3}$ the total height of the tree
d. the very top of the tree
43. Light distribution can affect tree form, resulting in _____.
a. greater development of the tree on the side exposed to the most sunlight
b. less growth on the side of the tree exposed to the most sunlight
c. a tall, spindly tree because of exposure to the sun
d. a short, overtopped tree because of exposure to the sun
44. Seed formation depends on the amount of reserve _____ and nitrogenous materials in a tree.
a. Fatty acids
b. Carbohydrates
c. Proteins and amino acids
d. Oxygen
45. The term _____ is used to describe the physical expression of an inherited tree trait that can be measured and observed.
a. Genotype
b. genetic map
c. physical map
d. phenotype
46. The damage done by the gypsy moth is when it is in the _____ stage.
a. Adult
b. Pupae
c. Egg
d. Larva
47. Adult insects have 6 legs, adult mites have ____ legs.
a. 2
b. 4
c. 6
d. 8
48. Abnormal growth on trees that is caused by insects or mites is often called _____.
a. Galls
b. Conks
c. Whirls
d. Scales

49. How many acres are in an area 25 chains long by 20 chains wide?

- a. .5 acres
- b. 5 acres
- c. 50 acres
- d. 500 acres

50. Trees are planted along city streets to help increase _____.

- a. gas removal and particulate collection
- b. summer air temperatures
- c. temperatures of sidewalks and road surfaces
- d. wind velocity

2022 National FFA Forestry CDE Knowledge Exam B Answer Key

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