



## 2019 Forestry Career Development Event

*Directions: Select the best answer and bubble it in on the score sheet provided. You may write on test booklet*

### KNOWLEDGE EXAM

1. How many square feet are in 2.5 acres?
  - A. 25,000
  - B. 43,560
  - C. 87,120
  - D. 108,900
  
2. When felling a tree, a \_\_\_\_\_ removes a wedge of wood from the side where the logger wants the tree to fall.
  - A. Back cut
  - B. Over cut
  - C. Undercut
  - D. Front cut
  
3. Name the regeneration system where mature timber is removed, usually the oldest or largest trees, either as single scattered trees or in small groups at relatively short intervals, commonly 5 to 20 years.
  - A. Selection
  - B. Clearcut
  - C. Seed Tree
  - D. Shelterwood
  
4. If 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?
  - A. 96
  - B. 432
  - C. 454
  - D. 545

5. What part of a timber sale contract depends upon the property boundaries?
  - A. Preamble
  - B. Description of sale area
  - C. Conditions of payment
  - D. Designation of which trees to cut
  
6. Which of the following is not a surface-rooted species?
  - A. Birch
  - B. Lodgepole Pine
  - C. Hickory
  - D. Hemlock
  
7. 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
  
8. If the male and female flower parts occur in separate flowers on the same tree, the species is said to be \_\_\_\_\_.
  - A. Dioecious
  - B. Monoecious
  - C. Carpellate
  - D. Angiosperms
  
9. If you are traveling an azimuth of 265, you are headed in a \_\_\_\_\_ direction.
  - A. Northwest
  - B. Northeast
  - C. Southeast
  - D. Southwest

10. Which of the following is a common leaf form?
- A. Dentate
  - B. Incised
  - C. Truncate
  - D. Lanceolate
11. What is the form class of a tree 16 inches in dbh and 12 inches in diameter inside bark at the top of the first 16-foot log?
- A. 75
  - B. .075
  - C. 1.33
  - D. 133
12. \_\_\_\_\_ is a method in which the performance of a genotype is tested over a geographic range.
- A. Genetic engineering
  - B. Progeny testing
  - C. Provenance testing
  - D. Clone testing
13. \_\_\_\_\_ are the fastest spreading of all types of fires.
- A. Crown fires
  - B. Ground fires
  - C. Surface fires
  - D. None of the above
14. Length of darkness influences plant growth. This is known as\_\_\_\_\_.
- A. Geotropism
  - B. Thermotropism
  - C. Photoperiodism
  - D. Light Intensity
15. Which of the following is not a type of veneer?
- A. Sawed
  - B. Scraped
  - C. Sliced
  - D. Rotary Cut

16. Several layers of vegetation found in a forest is called the\_\_\_\_\_.
- A. Strata
  - B. Canopy
  - C. Herb layer
  - D. Shrubs
17. \_\_\_\_\_rule assumes 1-inch boards and ¼ inch kerf, makes a liberal allowance for slabs, and disregards taper.
- A. International Rule
  - B. Doyle-Scribner Rule
  - C. Doyle Rule
  - D. Scribner Rule
18. For which of the following would a fungicide be used?
- A. Aphid
  - B. Slime Flux
  - C. Heart Rot
  - D. Nematode
19. When fuel burns, it reacts with oxygen from the surrounding air releasing heat and generating
- A. Pyrophoric
  - B. Pyrolysis
  - C. Oxidation
  - D. Deflagration
20. \_\_\_\_\_are considered to be better sources for fuelwood.
- A. Softwoods
  - B. Hardwoods
  - C. Low-density woods
  - D. Medium density woods
21. Which of the following is an accurate portrayal of the stages of succession?
- A. Perennials, annual weeds, shrubs, young trees
  - B. Annual weeds, shrubs, perennials, young trees
  - C. Annual weeds, young trees, shrubs, perennials
  - D. Annual weeds, perennials, shrubs, young trees

22. \_\_\_\_\_ is a small leaf like appendage to a leaf, typically borne in pairs at the base of the leaf stalk.
- A. Stipule
  - B. Petiole
  - C. Axillary Bud
  - D. Lenticel
23. When \_\_\_\_\_ occurs the seed breaks dormancy and begins to sprout.
- A. Fertilization
  - B. Pollination
  - C. Germination
  - D. Asexual Reproduction
24. In the rectangle survey system developed by Thomas Jefferson, \_\_\_\_\_ run north to south.
- A. Principal Meridians
  - B. Primary Meridians
  - C. Secondary Meridians
  - D. Guide Meridians
25. \_\_\_\_\_ is a cell structure that gathers excess water and wastes that are discharged through the cell wall.
- A. Mitochondrion
  - B. Golgi Apparatus
  - C. Chloroplast
  - D. Vacuole
26. A sapling is a tree that is more than \_\_\_\_\_ in height and up to \_\_\_\_\_ in diameter.
- A. 2', 3"
  - B. 3', 6"
  - C. 3', 4"
  - D. 1', 2"

27. How many board feet are present in a 2 inch thick, 12 inch wide, and 144 inch long board?
- A. 24
  - B. 288
  - C. 144
  - D. 32
28. An anther is a plant structure found on/in the\_\_\_\_\_.
- A. Leaf
  - B. Flower
  - C. Stem
  - D. Root
29. The first plants to grow naturally in a burned or cleared area are called \_\_\_\_\_.
- A. Softwoods
  - B. Pioneers
  - C. Hardwoods
  - D. Shrubs
30. A dicot has\_\_\_\_\_cotyledon(s).
- A. One
  - B. Two
  - C. Three
  - D. None
31. Which of the following is not correct?
- A. Sycamores as aggregate fruit
  - B. Pines have cones
  - C. Maples have samaras
  - D. Oaks as indehiscent
32. John's step factor is 2.86 feet. How many steps does John take to measure a distance of 100 feet?
- A. 40
  - B. 39
  - C. 35
  - D. 34

33. The scientific name for Chestnut Oak is....
- A. Quercus velutina
  - B. Quercus alba
  - C. Quercus rubra
  - D. Qurercus montana
34. \_\_\_\_\_ is lumber sawn in the horizontal plane, or end surface, of a log.
- A. Plain-sawn wood
  - B. Quarter-sawn wood
  - C. Endgrained-sawn wood
  - D. None of the above
35. A \_\_\_\_\_ is formed through meiosis consists of one chromatid from each original chromosome pair.
- A. Haploid cell
  - B. Diploid cell
  - C. Tetrad cell
  - D. Mother cell
36. Pulpwood being processed for paper is debarked then chipped into pieces about \_\_\_\_\_ in size.
- A. 1
  - B. 2
  - C. 3
  - D. 4
37. To use the \_\_\_\_\_, a forester pushes or drives the cutting edge through the bark until it reaches wood, then pushes the guard against the tree or log for a measurement.
- A. Bark Gauge
  - B. Increment Borer
  - C. Tree Caliper
  - D. Soil Auger

38. A complete soil profile includes these horizons in what order?
- A. A,B,C,E,O,R
  - B. B,A,C,O,E,R
  - C. O,A,E,B,C,R
  - D. R,O,A,C,E,B
39. \_\_\_\_\_ maps are color-enhanced photographic images that show land features.
- A. Orthophoto
  - B. Physical
  - C. Relief
  - D. Road
40. Some kinds of plants maintain their dominance over other plants by releasing chemicals into the area close around them that provide small doses of poison to invading plants. This is called\_\_\_\_\_.
- A. Allelopathic effect
  - B. Adaptive behavior
  - C. Carbonization process
  - D. Dendrification
41. The degree of acidity or alkalinity of a soil is expressed in pH values. Which of the following pH values is most acidic?
- A. 8.5
  - B. 7.0
  - C. 5.5
  - D. 4.0
42. \_\_\_\_\_ 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



43. You tally 9 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. 0.9
  - B. 9
  - C. 90
  - D. 10
44. If  $\text{Area} = \text{Pi} \times \text{radius}^2$ , then what is the plot radius for 1/5 acre?
- A. 37.25 feet
  - B. 52.6 feet
  - C. 58.9 feet
  - D. 66 feet
45. Which specie and bark type is incorrect?
- A. American Beech – Smooth
  - B. Eastern White Pine – Blocky
  - C. Hickory – Furrowed
  - D. Black Oak – Furrowed
46. Assume that a cord of firewood costs \$150, how much would a stack of wood measuring 4' x 4' x 16' cost?
- A. \$75
  - B. \$150
  - C. \$300
  - D. \$450
47. How many sections are there in a township?
- A. 1
  - B. 36
  - C. 640
  - D. 43,560
48. \_\_\_\_\_ is the capacity of a tree to develop and grow in the shade while in competition with other trees.
- A. Tracheids
  - B. Reproduction
  - C. Toughness
  - D. Tolerance

49. \_\_\_\_\_ a reconstituted board containing a high percentage of wood shaving in the central core with layers of wood flakes on either side of the core and fine sawdust near the surface.
- A. Particleboard
  - B. OSB
  - C. Fiberboard
  - D. Hardboard
50. Axial parenchyma cells originate from the cambium forming a network of \_\_\_\_\_ cells around the tree. They transport sugars (food) to the parenchyma cells within the growth ring, and they store starch.
- A. Living
  - B. Dead
  - C. Segmented
  - D. Guard



## 2019 Forestry Career Development Event

### KNOWLEDGE EXAM KEY

Question	Answer	Point Value	Standard
1	D	2	NRS.03.02.01.a
2	C	2	CS.03.04.02.c
3	A	2	NRS.01.01.01.c
4	D	2	NRS.01.05.03.c
5	B	2	NRS.01.05.03.c
6	C	2	CS.03.04.03.b
7	B	2	PS.02.03.02.a
8	B	2	PS.02.02.05.b
9	D	2	NRS.03.02.01.a
10	D	2	PS.02.01.01.a
11	A	2	NRS.01.02.06.c
12	C	2	PS.03.01.05.b
13	A	2	NRS.04.04.01.b
14	C	2	PS.01.01.01.b
15	B	2	NRS.02.04.01.a
16	A	2	NRS.01.05.01.b
17	D	2	CS.03.04.02.c
18	C	2	NRS.04.02.01.c
19	C	2	NRS.04.01.01.b
20	B	2	PST.01.01.01.a
21	D	2	NRS.01.05.01.b
22	A	2	PS.02.02.03.a
23	C	2	PS.02.02.06.a
24	A	2	ESS.05.01.01.c
25	D	2	PS.02.02.01.c
26	C	2	NRS.01.02.06.c
27	A	2	NRS.03.01.01.c
28	B	2	CS.03.04.02.c
29	B	2	NRS.01.05.01.b
30	B	2	PS.02.02.04.a
31	A	2	PS.02.02.06.b.
32	C	2	NRS.03.02.01.a
33	D	2	PS.02.01.01.a
34	C	2	CS.03.04.03.b
35	A	2	PS.02.02.01.b
36	A	2	NRS.02.04.01.a
37	A	2	CS.03.04.02.c

38	C	2	NRS.01.02.05.b
39	C	2	NRS.03.02.01.a
40	A	2	NRS.01.05.03.c
41	D	2	NRS.01.02.05.b
42	C	2	PS.02.02.03.a
43	C	2	NRS.01.02.06.c
44	B	2	ESS.05.01.01.c
45	B	2	NRS.01.02.01.b
46	C	2	NRS.03.01.01.c
47	B	2	NRS.03.02.01.a
48	D	2	PS.01.01.01.b
49	A	2	NRS.02.04.01.a
50	A	2	PS.02.02.01.c