

Indiana 4-H/FFA Forestry CDE
Question Bank – Senior Division

True/False, pages 1-12

Multiple Choice, pages 13-27

FFA questions, pages 28 - 47

Questions requiring calculations, pages 47-48

True/False Questions

1. Livestock grazing in woodlots is not a significant problem in Indiana.
True
False
2. The "figure" in a wood generally refers to the distinct markings on the face of a wood sample.
True
False
3. Photosynthesis is the process in the leaf cells that uses light, carbon dioxide and water to produce simple sugars.
True
False
4. The Tuliptree has perfect flowers (both male and female parts).
True
False
5. Most of Indiana's forest land is found in the Hoosier National Forest
True
False
6. If seedlings cannot be planted within a few days, they should be "heeled in" in a cool shady location.
True
False
7. Female flowers are also called pistillate flowers.
True
False
8. Red Cedar seeds are scattered mostly by water.
True
False

9. Cottonwood, willow and maple seeds are scattered mostly by wind.
True
False
10. Red and black oaks are the top ranked hardwood species used by Indiana sawmills.
True
False
11. Osage-orange is used in the manufacture of archery bows.
True
False
12. Habitat is the sum of all conditions that a species needs to survive and usually includes food, water, shelter and space.
True
False
13. The soft maples have scaly red, blunt buds; the buds of the hard maples are brown and pointed.
True
False
14. Pines are seldom used to reclaim eroded soils.
True
False
15. A cord is a pile of wood, bark and air spaces 4 feet high, 4 feet wide and 8 feet long.
True
False
16. Firewood should be stored away from the sides of buildings to increase drying rate and decrease the chance of insect infestation in the building's wooden structure.
True
False
17. Intolerant species are those which prefer to grow in the shade of other trees
True
False
18. Timber stand improvement (TSI) is designed to improve species composition, growth and quality of crop trees in an immature stand.
True
False

19. A stand table shows the volume per acre by species and DBH classes, while a stock table shows the number of trees per acre by species and DBH class.

True

False

20. Slope measures the angle of an area relative to the horizontal.

True

False

21. Ash and maple seeds are distributed mainly by water.

True

False

22. Black Walnut has dark brown, chambered pith.

True

False

23. Honeylocust is the only tree with doubly compound leaves found in Indiana

True

False

24. Osage-orange is used extensively in the manufacture of paper.

True

False

25. Both sugar maple and Boxelder produce their seeds in the fall.

True

False

26. Most of Indiana's forestlands are owned by state or federal governments.

True

False

27. Oak regeneration is often hampered on good sites by competition from other species.

True

False

28. American beech and sugar maple are examples of intolerant species.

True

False

29. Tree species normally grow to heights greater than 20 feet.

True

False

30. Black cherry can be dangerous to livestock.
True
False
31. Nearly 4,000,000 acres of forest land are found in Indiana.
True
False
32. Stem decay fungi are responsible for almost 80% of the disease losses in standing hardwoods.
True
False
33. A standard cord of wood occupies 128 cubic feet.
True
False
34. The goal of best management practice approach (BMP) is to avoid soil erosion and water pollution.
True
False
35. Basal area is the total diameter of all trees at ground level in a sample area.
True
False
36. Foliage height diversity refers to the number of layers of vegetation in a particular area.
True
False
37. Jack Pine, Red Pine and Black Walnut are well-suited for planting on coarse sands and gravelly soils.
True
False
38. Male flowers are called pistillate flowers.
True
False
39. Wildlife can benefit forests by eating insects and burying tree seeds.
True
False
40. Soft maple seeds ripen in the fall and hard maple seeds ripen in the spring.
True
False

41. The top three hardwood species used in Indiana sawmills are red oaks, black oaks, and black cherry
True
False
42. Hickory is used as fuel for meat smoking.
True
False
43. Slippery Elm has very rough leaves and gray twigs, American Elm has slightly rough leaves and brown twigs.
True
False
44. Conservation means to keep something to enjoy and study.
True
False
45. Preservation means use of non-renewable minerals and harvesting
True
False
46. Sweet Gum is often found growing with Pin Oak in the low, wet woods of Southern Indiana.
True
False
47. Acorns are a kind of mast.
True
False
48. Both male and female flowers are born on the same tree in the case of pines, hickories and walnuts.
True
False
49. Tree plantings for erosion control are usually five to six feet apart.
True
False

50. Salvage cuttings are made to remove trees killed or damaged by insects, disease, wind, fire or other injurious agencies.

True

False

51. Diplodia Tip Blight is an important disease in pines, especially Austrian pine.

True

False

52. Farmers own approximately 70% of forested land in Indiana.

True

False

53. Most forested land in Indiana is found in the southern half of the state.

True

False

54. Wildlife feed on the fruits of trees such as flowering dogwood and persimmon during the winter.

True

False

55. Wildlife feed on the fruits of trees such as red mulberry and black cherry during the winter

True

False

56. Most forest fires in Indiana are caused by lightning strikes

True

False

57. The cambium is a thin, green layer just inside the inner bark.

True

False

58. Black Walnut leaves are compound.

True

False

59. Livestock should be left to roam the forests to fertilize the soils.

True

False

60. Bark is considered the "armor" of a tree.

True

False

61. Willow wood is heavy, hard and strong with a high shock resistance and is typically used for flooring.
True
False
62. White Ash is commonly used to make ball bats, handles, oars and hockey sticks.
True
False
63. The seeds of elms, soft maples, willows and cottonwood ripen mostly in August.
False
True
64. Tulip tree and Boxelder seeds are scattered mostly by the wind.
True
False
65. Perfect flowers are those that have both male and female parts.
True
False
66. Outbreaks of insect damage are more common in mixed species stands than pure stands of one tree species.
False
True
67. Tree volumes can be estimated using the DBH and number of 12-foot lots.
True
False
68. Black Cherry and Red Mulberry seeds are scattered mostly by animals.
True
False
69. More mills in Indiana use Northern Red Oak and Black oak than Black Walnut
True
False
70. Tuliptrees and hard maples are the top ranked hardwood species used by Indiana sawmills.
False
True
71. American Basswood is better than White Ash for making baseball bats.
True
False

72. Black Cherry is used for furniture, paneling, caskets, and veneer.
True
False
73. Osage-orange is used in the manufacture of archery bows
True
False
74. Cottonwood is often used for face veneer paneling and bowling pins.
True
False
75. Osage-orange wood is used for fence posts and archery bows.
True
False
76. Willow wood is heavy and hard and is used for flooring.
True
False
77. Male flowers are also called staminate flowers.
True
False
78. Pines mature in 6 years.
True
False
79. Tree flowers that get pollinated never develop seeds.
True
False
80. Cottonwood, willow and maple seeds are scattered mostly by animals.
True
False
81. Basal Area is the area in square feet of the cross section of a tree stem a DBH.
True
False
82. Branch pruning is a cutting that removes lateral branches from crop trees to improve the value of one or more logs
True
False

83. Canopy is the cover of branches and foliage formed by the crowns of trees.
True
False
84. Aerial photographs are useful for making timber inventory maps.
True
False
85. Ohio buckeye has compound leaves with five leaflets.
True
False
86. Upper leaf surfaces of Slippery Elm are rougher than those of American Elm leaves.
True
False
87. Black Tupelo (Blackgum) fruits look like spiny balls.
True
False
88. Shagbark Hickory leaves usually have seven leaflets.
True
False
89. Boxelder leaves are arranged opposite to one another.
True
False
90. Eastern Cottonwood and Quaking Aspen leaf stems are long compared to the leaf stems of River Birch.
True
False
91. Both Black Oak and Northern Red Oak have bristle-tipped leaves.
True
False
92. Sassafras, Red Mulberry, and Boxelder have oppositely arranged leaves.
True
False
93. Sugar Maple leaves have rounded leaf crotches.
True
False

94. Both Black Locust and Honeylocust have doubly compound leaves.
False
True
95. Silver maple is one of the so-called "soft maples."
True
False
96. Bur Oaks have acorns with a hairy fringe on the cap.
True
False
97. Sycamore, Tuliptree, and black willow have leaf clasps at the base of the leaf stem.
True
False
98. Typical logging crew consists of at least one tree feller and one skidder operator.
True
False
99. White oaks produce a reliable crop of acorns which is an important food source for birds and mammals.
True
False
100. Leaving dead trees or snags enhances the habitat of cavity nesting birds.
True
False
101. Thinning is the removal of trees in an overstocked woods.
True
False
102. Scotts Pine and Eastern White Pine are the most common Christmas trees grown in Indiana
True
False
103. Shearing is the least important cultural activity involved in producing a high quality Christmas tree.
True
False
104. Livestock can be grazed successfully without harm to Christmas tree plantations
True
False

105. April and May are generally the best months to plant bare-root walnut seedlings so they can establish a root system before the following winter.

True

False

106. Recommended spacing for walnut plantations is 12 x 12 feet

True

False

107. About 67% of Indiana's forested land is owned by coal companies, water companies, sawmill companies and other private owners, while farmers own about 22%.

True

False

108. Most of Indiana's forest land is found on private land.

True

False

109. Scotch pines are the most commonly grown Christmas trees in Indiana.

True

False

110. Plants should be heeled in if it is going to be a week or longer till planting.

True

False

111. Evergreen windbreaks increase home heating costs.

True

False

112. Evergreen windbreaks provide winter cover for quail, pheasant, and songbirds.

True

False

113. Windbreaks stop 25 - 50% of the winter wind?

True

False

114. The ultimate goal of the tree measuring stick is to estimate the number of board feet of lumber in a tree

True

False

115. The Doyle rule is the most commonly used volume scale for timber in Indiana.

True

False

116. Trees with over 75% defective are considered cull.
True
False
117. Diffuse porous woods include oaks, elms and ash.
True
False
118. Wood rays serve to transport substance laterally through the tree
True
False
119. A given volume of a hardwood, such as cottonwood, will produce more heat than a light wood, such as hickory.
True
False
120. A standard cord of wood measures 4 x 4 x 8 feet while a rick has a variable width.
True
False
121. Freshly cut wood is .43 pounds water and .57 pounds dry wood.
True
False
122. Erosion after timber harvest can be decreased by seeding of grasses on bare soils.
True
False
123. Sedimentation caused by silvicultural activities can carry nutrients and pesticides into streams and reservoirs.
True
False
124. Shelterwood cutting is the slow removal of an entire wood.
True
False
125. Trees are best planted in the spring.
True
False
126. Fall is the best time to plant bare root trees and shrubs
True
False

Multiple Choice Questions

1. The following has/have doubly compound leaves:
 - a. Red Mulberry
 - b. Coffee-Tree
 - c. Black Walnut
 - d. B and C
 - e. A and B

2. DBH is measured:
 - a. 4 feet above ground
 - b. 3.5 feet above ground
 - c. 4.5 feet above ground
 - d. 5 feet above ground
 - e. None of the above

3. When using the Doyle Log Rule, what is the minimum diameter that is considered for volume estimates?
 - a. 16 inches
 - b. 12 inches
 - c. 10 inches
 - d. 8 inches
 - e. 6 inches

4. Which species fruit does not belong in the following group?
 - a. Persimmon
 - b. Redbud
 - c. Honey Locust
 - d. Coffee-Tree
 - e. Black Locust

5. The tree species best suited for planting in severely eroded places in southern Indiana is:
 - a. Black Walnut
 - b. Black Locust
 - c. Virginia Pine
 - d. Red Pine
 - e. Norway Spruce

6. Bristle-tipped leaves are found on:
 - a. Pin Oak
 - b. Black Oak
 - c. Red Oak
 - d. Shingle Oak
 - e. All of the above

7. Aspect is:
- a measure of slope angle
 - the direction toward which a slope faces
 - an indicator of the amount of sunlight an area receives
 - B and C
 - None of the above
8. Parenchyma are:
- plant cells which store food
 - animal cells which store food
 - leaf clasps
 - guard hairs on animal pelts
 - None of the above
9. The best fuel wood among those listed below is:
- Catalpa
 - Sycamore
 - Hackberry
 - White Oak
 - Sassafras
10. What is most dangerous in burning scrap lumber for firewood?
- poisonous wood preservatives
 - nails in wood
 - insect infestation
 - pieces are too large
 - None of the above
11. Wood ash can be used as a lawn and garden fertilizer. Which of the following elements is most abundant in wood ash?
- Nitrogen
 - Phosphorus
 - Iron
 - Potassium
 - Magnesium
12. The gradual reduction in tree diameter from the stump to the top log is called:
- gradation
 - slant
 - taper
 - cull
 - defect

13. Which of the following species is most suitable for plantings in muck and prairie soils?
- Tuliptree
 - Shrub willows
 - Autumn olive
 - Austrian Pine
 - B and D
14. Which of the following terms best describes a hardwood tree which is 1 to 5 inches diameter at DBH?
- small saw timber
 - fledgling
 - pole timber
 - sapling
 - cull
15. Insect outbreaks are likely in:
- pure stands of one tree species
 - even-age plantations
 - spring and summer
 - stands weakened by wind
 - all of the above
16. Which of the following insects damage tree roots directly?
- pine weevils
 - tent caterpillars
 - bagworms
 - white grubs (June beetle larvae)
 - inden loopers
17. Height of dominant trees at 50 years of age is used to calculate:
- suppression
 - silviculture
 - rotation
 - site index
 - niche
18. Which of the following is desirable for a good field notebook or journal?
- writer's name
 - date
 - location
 - B and C
 - all of the above

19. Alternate leaf arrangement is a characteristic of:
- a. maples
 - b. ashes
 - c. dogwoods
 - d. oaks
 - e. red pine
20. Oaks, hickories, maples, and beeches are all:
- a. hardwoods
 - b. mast producers
 - c. alternate leaves
 - d. A and B
 - e. B and C
21. Which species does not belong in the following group?
- a. Quaking Aspen
 - b. Eastern Cottonwood
 - c. Swamp Cottonwood
 - d. Tulip-poplar
 - e. Bigtooth Aspen
22. Indiana's most valuable hardwood species (per board foot) is:
- a. Mockernut Hickory
 - b. White Oak
 - c. Black Walnut
 - d. Black Cherry
 - e. Yellow-poplar
23. Palmately compound leaves are found on:
- a. Shagbark Hickory
 - b. Ohio Buckeye
 - c. Butternut
 - d. Boxelder
 - e. White Ash
24. A board foot is:
- a. 1" x 12" x 12"
 - b. 2" x 4" x 18"
 - c. 1" x 6" x 24"
 - d. 144 cubic inches
 - e. All of the above

25. The best fuel wood among those listed is:
- White Pine
 - Pignut Hickory
 - Quaking Aspen
 - American Basswood
 - Eastern Cottonwood
26. The tree part that captures energy from the sun is:
- cambium
 - photosynthesis
 - leaves
 - xylem
 - heterphagous sclera
27. Trees with distinctly variable leaf shapes include:
- Sassafras
 - Red Mulberry
 - Boxelder
 - A and B
 - All of the above
28. All trees that shed their leaves each fall are:
- hardwoods
 - broad-leaves
 - colored by frost
 - all the above
 - none of the above
29. Even-age management is:
- based on selecting single trees to harvest
 - used to establish intolerant species
 - not really useful in Indiana hardwood management
 - B and C
 - all of the above
30. Forest insect pests can be controlled by:
- chemical insecticides
 - insect parasites
 - insect diseases
 - mechanical controls
 - all of the above

31. Infectious leaf diseases:
- a. seldom cause tree death
 - b. may be caused by fungi
 - c. may be caused by bacteria
 - d. may be viral
 - e. all of the above
32. Trees that emerge from the majority of the forest canopy belong to the _____ crown class.
- a. intermediate
 - b. dominant
 - c. co-dominant
 - d. only B and C
 - e. all of the above
33. An organism's "job" in the community is its:
- a. site index
 - b. tolerance
 - c. habitat
 - d. niche
 - e. trophic level
34. The state tree of Indiana is:
- a. Northern Cardinal
 - b. Red Mulberry
 - c. Peony
 - d. Northern Red Oak
 - e. Tuliptree
35. Which of the following has winged seeds?
- a. Honeylocust
 - b. Ohio Buckeye
 - c. Tuliptree
 - d. Black Oak
 - e. Kentucky Coffeetree
36. Which of the following needles are four to six inches long?
- a. White Pine
 - b. Red Pine
 - c. Scotch Pine
 - d. Jack Pine
 - e. Virginia Pine

37. Which species does not belong in the following group based on leaf arrangement?
- Silver Maple
 - Black Willow
 - Black Walnut
 - Butternut
 - Black Oak
38. Which of the following trees has a different fruit type from the others?
- Black Locust
 - Kentucky Coffeetree
 - Eastern Redbud
 - Honeylocust
 - Black Cherry
39. Two methods used to reproduce even-aged stands are:
- clear cutting and branch pruning
 - clear cutting and shelter wood
 - selection and shelter wood
 - selection and branch pruning
 - branch pruning and shelter wood
40. Which of the following is not very important for a "Notice of Timber Sale?"
- legal description of where timber is located
 - deadline for receipt of bids
 - history of timber stand improvement practices
 - minimum property damage insurance carried by purchaser
 - estimated volume of timber in trees marked for harvest
41. The Doyle Log Rule gives estimates of timber volume in board feet using:
- log length and species
 - log length and DBH
 - species and DBH
 - DBH and small inside bark diameter
 - log length and small inside bark diameter
42. Which of the following is also known as Mockernut Hickory?
- Shagbark Hickory
 - White Hickory
 - Bitternut Hickory
 - Pignut Hickory
 - None of the above

43. Which of the following does not have winged seeds?
- a. White Ash
 - b. Boxelder
 - c. Ohio Buckeye
 - d. Sugar Maple
 - e. Silver Maple
44. Which of the following is best suited to fertile, limestone-derived soils?
- a. Norway Spruce
 - b. Black Locust
 - c. Black Walnut
 - d. Jack Pine
 - e. Tuliptree
45. Which of the following has spiny cones?
- a. Red Pine
 - b. White Pine
 - c. Scotch Pine
 - d. Jack Pine
 - e. Virginia Pine
46. Which species does not belong in the following group based on leaf arrangement?
- a. Boxelder
 - b. Black Walnut
 - c. Honey Locust
 - d. Black Locust
 - c. Shingle Oak
47. Which of the following trees often grows in wet or poorly drained soils?
- a. Pin Oak
 - b. Chestnut Oak
 - c. White Hickory
 - d. Pignut Hickory
 - e. None of the above
48. Which of the following trees has ring-porous wood?
- a. Sycamore
 - b. Tuliptree
 - c. Sugar Maple
 - d. Beech
 - e. Northern Red Oak

49. Which of the following is a relatively heavy wood in terms of weight per volume?
- Butternut
 - Dogwood
 - Boxelder
 - Basswood
 - Willow
50. Wood ash can be used as a lawn and garden fertilizer. Which of the following statements is false? Wood ash. . .
- contains mostly calcium.
 - contains about 5 - 15% nitrogen.
 - can be used to maintain soil pH of 6 to 7, especially on acidic soils.
 - contains more potassium than phosphorus.
 - is usually white, gray or black in color.
51. Which of the following can minimize insect damage to trees?
- remove infested slash
 - change tree species composition
 - allow insect-damaged trees to die in place
 - A and B
 - A and C
52. Which of the following insects damage conifers?
- Locust leaf miners
 - Tent caterpillars
 - Carpenter worms
 - Colombian timber beetles
 - Bagworm
53. Non-infectious diseases of trees can be caused by all the following except:
- mechanical injuries
 - sudden change in temperature
 - air pollution
 - anthracnose
 - water pollution
54. Which of the following is not used commonly for pulpwood?
- Black Walnut
 - Tuliptree
 - Sycamore
 - Largetooth Aspen
 - Black Tupelo

55. Which of the following should not be planted on dry, somewhat eroded soils?
- a. White Pine
 - b. Jack Pine
 - c. Scots Pine
 - d. Red Pine
 - e. Eastern Redcedar
56. Which of the following is not an example of a primary wood-using industry?
- a. lumber
 - b. veneer
 - c. cabinet-making
 - d. cooperage
 - e. paper
57. Which of the following woods is not hard, heavy, and strong?
- a. Eastern Redcedar
 - b. Hard Maple
 - c. Tuliptree
 - d. White Ash
 - e. Honeylocust
58. Which of the following is an insect which damages tree stems directly?
- a. anthracnose
 - b. tent caterpillars
 - c. Verticillium wilt
 - d. Diplodia Tip Blight
 - e. Carpenter worms
59. Which of the following trees needs to be planted in deep, fertile, well-drained soils?
- a. Black Walnut
 - b. Scotch Pine
 - c. Virginia Pine
 - d. Red Pine
 - e. Norway Spruce
60. Which is not of the Red Oak family?
- a. Black oak
 - b. Pin oak
 - c. Bur oak
 - d. Shingle oak

61. Which one of the following trees have fruits scattered mostly by wind?
- Black Locust
 - Northern Red Oak
 - Yellow-poplar or Tuliptree
 - Osage-orange
 - Black Cherry
62. Which one species does not belong in the following group based on seed dispersal mechanisms?
- Persimmon
 - Red Maple
 - White Ash
 - Boxelder
 - Cottonwood
63. Which one species does not belong in the following group based on seed dispersal mechanisms?
- Persimmon
 - Dogwood
 - Black Cherry
 - Black Walnut
 - Cottonwood
64. Which of the following is an insect which damages foliage?
- Tent caterpillar
 - Locust borer
 - Verticillium wilt
 - Diplodia Tip Blight
 - Carpenter worm
65. Which tree has perfect flowers?
- Black locust
 - Walnut
 - Basswood
 - A & C
66. Basal area per acre is:
- a measure of the bare ground between trees
 - the area in square feet of the cross section of tree stems at ground level
 - the area in square feet of the cross section of tree stems at DBH
 - percent crown cover
 - None of the above

67. Which of the following is desirable for a woodland management plan?
- history of past management
 - management objectives
 - maps
 - B and C
 - All of the above
68. "A group of trees having similar characteristics which will allow for treatment as a single unit in a management plan":
- understory
 - saw timber
 - rotation
 - forest stand
 - overstory
69. In Indiana we use this formula $v = (D-4)^2$ to decide the volume in board-feet of a log is called?
- Volume of a tree
 - Doyle Log Rule
 - Tree measuring stick
 - Indiana's Rule
70. What tool is used to estimate board-feet in standing timber?
- Chainsaw
 - Clinometer
 - Tree calipers
 - Tree measuring stick
 - Brunton compass
71. The following has opposite leaves:
- Red Mulberry
 - Persimmon
 - Boxelder
 - Sassafras
 - A and B
72. The following oak leaves are bristle-tipped:
- Black
 - Swamp white oak
 - Pin
 - All of the above
 - A and C

73. Which of the following does not have compound leaves?
- A. Honeylocust
 - B. Mockernut Hickory
 - C. Black Walnut
 - D. Boxelder
 - E. Sycamore
74. The following has/have toothed margins:
- A. Red Mulberry
 - B. American elm
 - C. Black gum
 - D. Sassafras
 - E. A and B
75. Which of the following trees have two leaves per cluster?
- A. White Pine
 - B. Red Pine
 - C. Scotch Pine
 - D. B and C
 - E. A and C
76. Which of the following oaks does not have bristle-tipped leaves?
- A. Pin Oak
 - B. Black Oak
 - C. Red Oak
 - D. Shingle Oak
 - E. Bur Oak
77. Which months are generally best for planting Black Walnut trees?
- A. December - February
 - B. March, April, May
 - C. June, July
 - D. August, September
 - E. October, November
78. pH level for walnuts should be?
- A. 6.5 to 7.2
 - B. 7.2 to 8.5
 - C. 5.2 to 6.5
 - D. None

79. Stanley Coulter, one of the early conservationists of the state, reported in that approximately _____ percent of Indiana was covered by hardwood forests before settlement by Europeans:
- A. 10
 - B. 30
 - C. 55
 - D. 87
80. Today, approximately _____ percent of Indiana is covered by hardwood forests:
- A. 10
 - B. 20
 - C. 30
 - D. 40
 - E. 50
81. Pines are used for:
- A. Stopping erosion
 - B. planting on worn out land
 - C. Wind breaks
 - D. A, B, and C
82. Hardwood seedlings that are shipped after one year in the seed bed are called _____:
- A. 1-0 stock
 - B. 2-0 stock
 - C. 2-1 stock
 - D. 2-2 stock
 - E. None of the above
83. Which of the following can ruin a tree planting?
- A. rabbits
 - B. fire
 - C. cattle grazing
 - D. A and C
 - E. All of the above
84. Windbreaks can provide all except the following benefits:
- A. increased wildlife habitat
 - B. decreased home heating costs
 - C. increased property values
 - D. increased fire protection
 - E. None of the above

85. The three steps in using the tree measuring stick are:
- A. measure tree diameter (DBH), estimate 6-foot logs, read tree volume from stick
 - B. measure tree diameter at DBH, estimate 12-foot logs, read tree volume from stick
 - C. measure tree volume (DBH), estimate 12-foot logs, read tree diameter from stick
 - D. measure DBH volume, estimate 12-foot logs, read tree volume from stick
 - E. None of the above
86. When estimating number of 12-foot logs with a tree measuring stick one usually paces off _____ feet from the base of the tree:
- A. 25
 - B. 50
 - C. 75
 - D. 100
 - E. None of the above
87. If someone offered you free wood, which would you take to heat your home?
- A. Boxelder
 - B. Catalpa
 - C. Aspen
 - D. Cottonwood
 - E. White Oak
88. Which of the following actions is best to help firewood dry faster?
- A. cut wood into large pieces
 - B. drive nails into wood
 - C. pile small pieces in single rows
 - D. store wood against a building
 - E. bury in the ground
89. If someone offered you free wood, which would you take to heat your home?
- A. Basswood
 - B. Sycamore
 - C. Beech
 - D. Catalpa
 - E. Sassafras
90. Which of the following is a relatively light wood in terms of weight per volume?
- A. Black Walnut
 - B. Flowering Dogwood
 - C. Common Persimmon
 - D. Northern Catalpa
 - E. Osage-orange

National FFA Questions

1. The purpose of a Hypo-Hatchet is to:
 - A. Apply a blaze to trees to mark boundaries
 - B. Cut small trees quickly
 - C. Girdle a tree
 - D. Inject a tree with herbicide
2. To view an area in three dimensions use:
 - A. A pair of aerial photographs and a magnifying lens
 - B. A pair of aerial photographs and a stereoscope
 - C. A pair of topographic maps and a magnifying lens
 - D. A pair of topographic maps and a stereoscope
3. You are using a clinometer to determine tree height on level ground from a distance of 100'. Your reading to the top of the tree is +75%; the bottom reading is -5%. What is the height of the tree?
 - A. 70'
 - B. 75'
 - C. 80'
 - D. 100'
4. Amber glass wedge prisms are more useful than clear glass prisms:
 - A. At night
 - B. Bright sunlight
 - C. In low light and hazy conditions
 - D. Both A & B
5. Chain saw chaps protect the wearer by:
 - A. Bouncing the saw off the leg and away from the body
 - B. Clogging the moving chain with cut-resistant fabric
 - C. Preventing the wearer from becoming tangled in briars
 - D. Using a thin layer of metal to prevent the chain from cutting through
6. One way in which white oaks differ from red oaks is that the acorns of white oak:
 - A. Mature in one season
 - B. May take five or more years to reach maturity
 - C. Remain on the tree for three years
 - D. Take two seasons to mature
7. Which of the following pest management strategies is categorized as a biological method?
 - A. Fumigate nursery beds before sowing or planting
 - B. Harvest diseased timber.
 - C. Release parasites or predators to reduce pest populations
 - D. Remove bark from wood that may harbor or attract beetle.

8. Which of the following pest management strategies is categorized as a silvicultural method?
- A. Coat uninfested wood with pain, wax, varnish, or oil.
 - B. Harvest mature trees or stands
 - C. Use conventional insecticides
 - D. Open hardwood stands
9. Which type of habitat most greatly benefits Woodcock?
- A. Dense coniferous forests
 - B. Moist woodlands
 - C. Open brushy areas
 - D. Open hardwood stands
10. Forest and open meadows provide ideal habitats for:
- A. American Bison
 - B. American Elk
 - C. Mountain Goat
 - D. Pronghorn Antelope
11. A _____ is the type of control burn best used for hazard reduction in young stands with a heavy layer of litter.
- A. Back fire
 - B. Flank fire
 - C. Ring fire
 - D. Strip head fire
12. *Tsuga canadensis* is the scientific name for:
- A. Black Walnut
 - B. Eastern Hemlock
 - C. Longleaf Pine
 - D. Pecan
13. Which of the following would be considered a method of direct visitor management in managing outdoor recreation areas?
- A. Eligibility requirements
 - B. Enforcement of regulations
 - C. Information distribution
 - D. Physical alterations
14. Rain, snow, sleet and hail are forms of:
- A. Evaporation
 - B. Infiltration
 - C. Precipitation
 - D. Transpiration

15. The mid-summer water temperature in a stream flowing through a clear cut would be _____ the temperature of the water prior to the cut.
- A. Higher than
 - B. Lower than
 - C. The same as
16. Which of the following would be considered mechanical tree damage?
- A. Frost crack
 - B. Girdling roots
 - C. Powdery mildew
 - D. Sunscald
17. A restricted-use pesticide may only be purchased and used by:
- A. Adults over 18 years old
 - B. Certified applicators
 - C. Cooperative Extension Agents
 - D. Licensed foresters and arborists
19. Which of the following species has dark brown heartwood?
- A. Hickory
 - B. Magnolia
 - C. Redwood
 - D. White Pine
20. _____ are desirable pulp species because they can be bleached easily.
- A. Cedar and Firs
 - B. Oaks and Hickories
 - C. Pines and Firs
 - D. Spruces and Hemlocks
21. White Pine, Ponderosa Pine and Red cedar sawdust and shavings are particularly useful for:
- A. Animal bedding
 - B. Dyes
 - C. Metal finishing
 - D. Sawdust- cement concrete
22. A topographic divide is a mechanism for defining
- A. Forest management areas
 - B. Housing developments
 - C. Rangelands
 - D. Watersheds

23. Doyle, Scribner and International Rules are:
- A. Codes governing ethical behavior by foresters around the world
 - B. Means by which log volumes are determined
 - C. Rules used in logging competitions
 - D. Regulations concerning how timber is marked for sale
24. 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 $\frac{2}{3}$ of the total height of the tree
 - D. The very top of the tree
25. Which of the following is not commonly used for planting tree seedlings?
- A. Auger
 - B. Dibble
 - C. Mattock
 - D. Pulaski
26. An advantage of natural forest regeneration is:
- A. Better access for fire equipment
 - B. Better early root system development by seedlings
 - C. Good control over stocking and spacing
 - D. Less need for precommercial thinning
27. Mechanized felling:
- A. Is most useful when logs are to be handled individually after the felling process
 - B. Is slower and more expensive than manual felling
 - C. May be a disadvantage in areas of thick brush
 - D. May improve efficiency by increasing felling production
28. An articulated log skidder is:
- A. A modified farm tractor
 - B. Less maneuverable than a non-articulated skidder
 - C. One with a hinge in the midsection
 - D. Suitable only for gentle terrain
29. Which of the following is a fixed cost of a logging operation?
- A. Electricity
 - B. Fuel
 - C. Rent for office space
 - D. Telephone

30. A source of revenue for a logging operation is:
- A. Depreciation
 - B. Income Tax
 - C. Log Sales
 - D. Vehicle insurance
31. Any chemical purchased for commercial use will be accompanied by details relating to chemical make-up, first aid instructions, proper disposal, and health concerns. This information is contained in the:
- A. Material Safety Data (MSD) Sheets
 - B. Safe Materials Use (SMU) Sheets
 - C. Chemical Safety Data (CSD) Sheets
 - D. Safe Pesticide Application (SPA) Sheets
32. A good way to improve urban and suburban wildlife habitats is to:
- A. Plant flower gardens
 - B. Plant specimen trees.
 - C. Reduce mowed areas
 - D. Remove or decrease under story
33. Trees planted along city streets are valuable for increasing:
- A. Particulate collections and gas removal
 - B. Summer air temperatures
 - C. Summer temperatures of sidewalks and road surfaces.
 - D. Wind velocity
34. Safety gear, such as hard hats and goggles should meet ANSI standards. ANSI represents:
- A. American National Standards Institute
 - B. American Naval Safety Inspectors
 - C. American National Safety Institute
 - D. Association of North American Safety Inspectors
35. Workplace safety is overseen by OSHA. This acronym stands for:
- A. Occupational Safety and Health Administration
 - B. Occupational Safety and Health Association
 - C. Office of Safety and Health Affairs
 - D. Organization of Safety and Health Affairs
36. If you have 13 paces per chain, how many paces are in two miles?
- A. 26
 - B. 208
 - C. 1716
 - D. 2080

37. Square blocks measure six miles per side. The blocks are called:
- A. Corners
 - B. Rangers
 - C. Sections
 - D. Townships
38. What is the site quality of a Slash Pine tree that is 25-years-old and 60 feet tall?
- A. 25
 - B. 60
 - C. 65
 - D. Cannot determine without a site quality curve
39. How many sections are in a township?
- A. 32
 - B. 36
 - C. 64
 - D. 640
40. If you are traveling at an azimuth reading of 315 you are heading:
- A. Northeast
 - B. Northwest
 - C. Southeast
 - D. Southwest
41. An example of a defoliating insect is a:
- A. Aphid
 - B. Bark Beetle
 - C. Pine Sawfly
 - D. Wasp
42. Which of the following is the correct format for writing a legal description of a land parcel?
- A. NE $\frac{1}{4}$ of SE $\frac{1}{4}$, R2E, T4N, S16
 - B. NW $\frac{1}{4}$ of SW $\frac{1}{4}$, S16, T4N, R2E
 - C. R2E, S16, T4N, NW $\frac{1}{4}$ of SW $\frac{1}{4}$
 - D. S16, T4N, R2E, NE $\frac{1}{4}$ of SE $\frac{1}{4}$
43. The function of the cambium in the tree is _____.
- A. Development
 - B. Growth in height of tree
 - C. Growth of wood and bark cells
 - D. Production of carbohydrates

44. Homeowners can reduce cooling costs by:
- A. Not planting any trees at all
 - B. Planting trees on the east and west sides of the house
 - C. Planting trees on the north side of the house
 - D. Planting trees on the south and west sides of the house
45. Which of these tree species has compound leaves?
- A. American Holly (*Ilex opaca*)
 - B. Black Cherry (*Prunus serotina*)
 - C. Common Sassafras (*Sassafras albidum*)
 - D. White Ash (*Fraxinus Americana*)
46. A soil profile is made of different soil layers. The proper term for a soil layer is:
- A. Horizon
 - B. Strata
 - C. Vertical
 - D. Zone
47. The greatest amount of distortion on an aerial photograph occurs at:
- A. The bottom half of the photo
 - B. The center of the photo
 - C. The edges of the photo
 - D. The top half of the photo
48. During forestry operations, buffer strips should be left along streams to reduce erosion and provide shade for fish. These buffer strips are called:
- A. Broad-Based Dip Zones (BDZ)
 - B. Forest Preservation Zones (FPZ)
 - C. Regeneration Shade Zones (RSZ)
 - D. Streamside Management Zones (SMZ)
49. The final stage of fire suppression is called:
- A. Backfire
 - B. Direct attack
 - C. Initial attack
 - D. Mop-Up
50. To determine site index two measurements are needed. They are:
- A. Age and diameter
 - B. Diameter and distance from the closest tree
 - C. Height and age
 - D. Height and diameter

51. A Pulaski is used in firefighting for:
- A. Felling and clearing
 - B. Grubbing and chopping
 - C. Raking and sweeping
 - D. Scraping and raking
52. Convulsions, secretions from nose and ears, loss of consciousness and inability to breathe are symptoms of:
- A. Heat stroke
 - B. Hypothermia
 - C. Severe pesticide poisoning
 - D. Smoke inhalation
53. The greatest amount of forest plantation regeneration occurs in which region of the United States?
- A. North Eastern
 - B. Pacific Coast
 - C. Rocky Mountain
 - D. Southern
54. If a tree farmer plants seedlings on 8' X 10' spacing, he/she will plant _____ seedlings per acre.
- A. 450
 - B. 545
 - C. 4356
 - D. 5445
55. Reducing a felled tree into marketable size logs is called:
- A. Bucking
 - B. Felling
 - C. Limbing
 - D. Skidding
56. To locate and map points, the best tool to use would be the:
- A. Aerial photograph
 - B. GPS receiver
 - C. Hand compass
 - D. Topographic map
57. The contour interval on a topographic map indicates the:
- A. Difference in elevation represented by adjoining contour lines
 - B. Different types of contour lines
 - C. Elevation at a specific point
 - D. Elevation of a general area

58. Your company plans a prescribed burn on a tract of land that is 20 chains by 10 chains. The cost of prescribed burning in your area is \$5.00/ acre. Under typical conditions, how much will it cost to prescribe burn your land?
- A. \$15
 - B. \$100
 - C. \$500
 - D. \$1000
59. Which of the following would be a biological pest management strategy?
- A. Coating uninfested wood with paint
 - B. Harvesting mature trees or stands
 - C. Releasing parasites or predators
 - D. Spraying with conventional pesticides
60. A defoliator is an insect that:
- A. Chews bark and wood
 - B. Chews leaves
 - C. Feeds on buds
 - D. Feeds on the tips of twigs
61. Which of the following is considered a parasitic cause of disease?
- A. Drought
 - B. Fungi
 - C. Ice Storm
 - D. Salt
62. How many acres are in an area 25 chains long and 20 chains wide?
- A. 0.5 acres
 - B. 5.0 acres
 - C. 50 acres
 - D. 500 acres
63. In a forest ecosystem a tree with a small crown receiving light from above and almost none from the sides would be considered.
- A. Co-dominant
 - B. Dominant
 - C. Inferior
 - D. Intermediate
64. Thinning overstocked stands in order to manage or control pests is a _____ pest management strategy.
- A. Biological
 - B. Chemical
 - C. Regulatory
 - D. Silvicultural

65. A conifer with scales rather than needles is the:

- A. Cedar
- B. Fir
- C. Spruce
- D. Yew

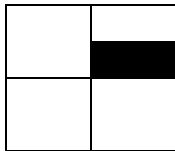
66. An example of a stem canker disease is:

- A. Chestnut blight
- B. Dutch elm disease
- C. Fomes annosus
- D. White pine blister rust

67. Soil with a pH of 7.0 is considered:

- A. Acidic
- B. Alkaline
- C. Neutral
- D. None of the above

68. What is the legal description for the tract of land shown below?



- A. N $\frac{1}{2}$ of the NE $\frac{1}{4}$ of Section 30, Township, Range
- B. NE $\frac{1}{4}$ of the SW $\frac{1}{2}$ of Section 30, Township, Range
- C. S $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 30, Township, Range
- D. S $\frac{1}{2}$ of the NE $\frac{1}{4}$ of Section 30, Township, Range

69. What is the size of the area described above?

- A. 20 acres
- B. 40 acres
- C. 80 acres
- D. 100 acres

70. A genus of tree noted for its great size and long life is:

- A. Alnus
- B. Betula
- C. Salix
- D. Sequoia

71. Magnetic declination is the:
- A. Angle of difference between True North and Magnetic North
 - B. Angle of difference between True North and True South
 - C. Angle of slope on a hill
 - D. Standard error for pacing
72. A primary benefit to selection cutting as a harvest method is that:
- A. All trees are removed at once, thus giving the owner maximum value
 - B. Erosion is at a minimum
 - C. It is the most cost effective
 - D. None of the trees left uncut are disturbed
73. The term “chlorosis” or “chlorotic” refers to:
- A. A plant containing chlorine
 - B. Build up of chlorophyll
 - C. Excessive leaf drop
 - D. Yellowing of the leaves
74. Growth at the end of the stem is called:
- A. Preliminary growth
 - B. Primary growth
 - C. Terminal growth
 - D. Turgid growth
75. A very highly valued wood used in furniture construction is:
- A. Alder
 - B. Hackberry
 - C. Walnut
 - D. Yew
76. The plant hardiness zone map is a map, developed by the USDA, which divides the country into ten zones based on:
- A. Average summer temperatures
 - B. Average winter temperatures
 - C. Geographic region
 - D. Species location
77. Aggressive reproduction, rapid growth, and high quality wood have made _____ the most managed pine of the northern forest.
- A. Loblolly Pine
 - B. Longleaf Pine
 - C. Red Pine
 - D. White Pine

78. A GPS utilizes _____ to locate points
- A. Computerized maps
 - B. Magnetic North
 - C. Satellites
 - D. True North
79. Birch is most easily recognized by its:
- A. Bark
 - B. Form
 - C. Fruit
 - D. Leaf Shape
80. Tree species that have male and female flowers on separate trees are called:
- A. Bioecious
 - B. Dioecious
 - C. Monoecious
 - D. Triecious
81. About two-thirds of the U.S. forest is considered:
- A. Commercial
 - B. Non-commercial
 - C. Park lands
 - D. Wilderness areas
82. Forest pathology is the study of:
- A. Forest habitats
 - B. Forest insects
 - C. Tree identification
 - D. Tree diseases
83. The term “kerf” refers to:
- A. A piece of protective clothing worn by chain saw operators
 - B. The amount of time it takes to saw through a log completely
 - C. The size of a log
 - D. The width of a cut made by a saw
84. The abbreviation “IPM” stands for:
- A. Integral Pest Maintenance
 - B. Integral Pest Management
 - C. Integrated Pest Management
 - D. Integrated Product Management

85. A cant that measures 12" X 12" X 40" contains _____ board feet of timber.
- A. 40
 - B. 144
 - C. 400
 - D. 4800
86. *Pinus palustris* is the scientific name for:
- A. Eastern White Pine
 - B. Longleaf Pine
 - C. Ponderosa Pine
 - D. Spruce Pine
87. The process of heating seasoned wood in a preservative for several hours and quickly submerging the wood in a cold preservative and allowing it to remain there for several hours more is called:
- A. Cold-soaking
 - B. Double diffusion
 - C. Extraction
 - D. Hot-cold bath
88. Best Management Practices include all of the following EXCEPT:
- A. Allowing goats to graze in newly planted areas to protect seedlings from weed competition
 - B. Control of logging during wet seasons
 - C. Temperatures of sidewalks and road surfaces
 - D. Using buffers
89. Which of the following would be considered a public employment opportunity?
- A. Audubon Society
 - B. Bureau of Land Management
 - C. International Paper
 - D. Weyerhaeuser
90. Chromated zinc chloride is superior to zinc chloride due to its
- A. Lower cost
 - B. Lower fire hazard
 - C. Resistance to flaking
 - D. Resistance to leaching
91. Surveys of the boundaries of a timber tract are done to
- A. Determine stand classification
 - B. Establish exact property lines
 - C. Find the volume of timber on the tract
 - D. Locate fences and firebreaks

92. Piling used in docks, wharves, bridges, and foundations must have a minimum quality
- A. Class A
 - B. Class B
 - C. Class C
 - D. Class D
93. The width of a cut made by a saw is called the
- A. Cant
 - B. Gap
 - C. Kerf
 - D. Notch
94. The first consideration in using chemical pesticides should always be
- A. Ease of application
 - B. Economic feasibility
 - C. Safety
 - D. Timing of the application
95. The most widely known and used hardwood is
- A. Ash
 - B. Hickory
 - C. Maple
 - D. Oak
96. The weight of the complete tree that can be used to produce energy is called:
- A. Biomass
 - B. Energy flow
 - C. Energy fuel value
 - D. Thermal unit
97. The oldest and most common method of remote sensing used in forestry is:
- A. Aerial photography
 - B. Electromagnetic radiation
 - C. Ground cruise
 - D. Thermal scan
98. John's normal pace is 2.9 feet long. How many paces would he need to measure three chains?
- A. 15
 - B. 30
 - C. 68
 - D. 72

99. Which of the following is NOT considered a primary wood industry?
- A. Furniture manufacturing
 - B. Plywood plant
 - C. Pulp mill
 - D. Sawmill
100. Which of the following insects is NOT a serious problem in the Northeast?
- A. Forest tent caterpillar
 - B. Gypsy moth caterpillar
 - C. Mountain pine beetle
 - D. Spruce budworm
101. Which of the following is true with regard to crown fires?
- A. They almost always start as surface fires
 - B. They are more common in deciduous forests
 - C. They are the most common type of forest fires
 - D. They are the slowest spreading of all fires
102. As a general rule, the market demand for hardwood
- A. Far exceeds that for softwood
 - B. Has been declining at a steady rate since the 1980's
 - C. Is greatest in the Southeast
 - D. Varies between regions
103. The 1986 Tax Reform Act affected forest investments by
- A. Allowing forest owners to charge annual management costs against current income
 - B. Establishing differential tax rates for all types of long-term capital gains income
 - C. Keeping the economic climate for long-term forest investments the same
 - D. Phasing out differential tax rates for all types of long-term capital gains income
104. Which of the following is NOT true with regard to the topographic Abney level?
- A. It contains a scale that directly corresponds to the correction graduations on a slope tape.
 - B. It is used primarily on normal terrain
 - C. It is used to supplement slope tapes on very steep terrain
 - D. It measures the angle between the horizontal plane and line of sight along the scope
105. A growth-removal ratio of 1:27 means that
- A. Growth exceeded removal by 27 percent
 - B. Removal exceeded by growth by 27 percent
 - C. 27 trees were planted for every one tree cut
 - D. One tree was planted for every 27 trees cut

106. The current trend in Forest Service ecosystem management policy is
- A. Allocation of resources
 - B. Clear cutting as much as possible
 - C. Holistically assessing each situation
 - D. Implementing geographical boundaries to separate various uses
107. Oriented Strand Board (OSB) is:
- A. Made from recycled plastic chips
 - B. Made from wood chips
 - C. More expensive to produce than plywood veneers
 - D. Showing a rapid decline in use in the United States
108. Abnormal tissue growth on trees that is caused by insects or mites is called
- A. Conk
 - B. Fungus
 - C. Gall
 - D. Pitch
109. Which of the following is NOT considered a naturally durable wood?
- A. Black Walnut
 - B. Cedar
 - C. White Oak
 - D. White Pine
110. A standard cord of wood measures:
- A. 128 cubic feet
 - B. 128 square feet
 - C. 160 cubic feet
 - D. 160 square feet
111. Which of the following statements is true with respect to forest ecosystem?
- A. A disease outbreak is likely to do more damage to a mixed ecosystem than a single-species plantation
 - B. A single-species plantation is more resistant to insect damage than a mixed one
 - C. One natural disaster in the stand will not result in a total loss in timber resources
 - D. The more diverse an ecosystem, the more resistant it is to insect damage
112. The life span of the adult gypsy moth is usually about
- A. 1 day
 - B. 7 days
 - C. 15 days
 - D. 45 days

113. The most damaging pollutant in the United States is currently thought to be
- A. Lead
 - B. Nitrates
 - C. Ozone
 - D. Zinc
114. The part of the logging operation in which logs are dragged from where they were cut to a central location for loading is called
- A. Bucking
 - B. Felling
 - C. Snagging
 - D. Skidding
115. In rangeland management, an animal unit month (AUM) is
- A. The amount of organic fertilizer deposited by a 1,000 pound cow in one month
 - B. The amount of forage needed to feed a 1,000 pound cow for one month
 - C. The number of cattle grazing in a specific area for one month
 - D. The number of cattle sold during one month
116. The first chief of the United States Forest Service was:
- A. Franklin B. Hough
 - B. Gifford Pinchot
 - C. James Audubon
 - D. John McSweeney
117. A compass needle points to magnetic north, which is the same as
- A. The North Pole
 - B. True North
 - C. 1,300 miles from True North
 - D. 13,000 miles from True North
118. Removing trees that have been or may be killed or damaged due to insects, ice, fire, and other agents is called
- A. Liberation
 - B. Pruning
 - C. Salvage Cutting
 - D. Sanitation Cutting
119. Paper was first made from ground mulberry bark by the:
- A. Native Americans (indigenous people of the Americas)
 - B. Chinese
 - C. Egyptians
 - D. Incas

120. Water combined within the cell wall in wood is called
- A. Bound water
 - B. Fiber water
 - C. Free water
 - D. Suppressed water
121. When planting trees, a spacing of 8 X 8 feet will result in how many trees per acre?
- A. 340
 - B. 680
 - C. 3400
 - D. 6800
122. The most destructive of all forest insects are
- A. Borers
 - B. Gall mites
 - C. Leaf feeders
 - D. Plant-sucking mites
123. The scientific name for post oak is
- A. *Quercus falcata*
 - B. *Quercus lyrata*
 - C. *Quercus phellos*
 - D. *Quercus stellata*
124. Of all of the environmental factors that influence the growth of trees, the most limiting is
- A. Topography
 - B. Moisture
 - C. Soil quality
 - D. Temperature
125. Which of the following is not a correct procedure to use in planting seedling?
- A. Always pack soil firmly around the roots
 - B. Plant only one tree in a given spot
 - C. Plant seedlings in an upright position, with the roots double up
 - D. Plant seedlings slightly deeper than they grew in the nursery
126. Which of the following would NOT make you more successful in a forestry career?
- A. Demonstrating knowledge and skills
 - B. Doing everything by yourself, including team assignments
 - C. Good communication skills
 - D. Looking professional

127. Which of the following is NOT considered a common method of testing improved seeds or seedlings?
- A. Clone Testing
 - B. Progeny Testing
 - C. Provenance Testing
 - D. Regulation Testing
128. Which of the following is an accurate portrayal of the stages of succession?
- A. Annual weeds, perennials, shrubs, young trees
 - B. Annual weeds, shrubs, perennials, young trees
 - C. Annual weeds, young trees, shrubs, perennials
 - D. Perennials, annual weeds, shrubs, young trees
129. The Material Safety Data (MSD) sheet contains information about all of the following EXCEPT:
- A. Chemical make-up
 - B. Cost per application
 - C. First aid instructions
 - D. Proper disposal
130. Which of the following careers would most likely involve managing timberland for private landowners?
- A. Forest Engineer
 - B. Professional Consulting Forester
 - C. Research Forester
 - D. Urban Forester
131. Maps that convert three-dimensional feature into a two-dimensional representation are:
- A. Contour
 - B. Raised-relief
 - C. Relief
 - D. Topographic
132. A tree with very heavy, strong and durable wood that has a rich dark brown color is:
- A. Ash
 - B. Hickory
 - C. Maple
 - D. Walnut
133. Which of the following is not usually considered a part of fire management?
- A. Presuppression
 - B. Prevention
 - C. Retarding
 - D. Suppression

134. The Federal agency that studies and monitors geology and publishes topographic maps is the:
- A. Department of the Interior
 - B. Environmental Protection Agency
 - C. Department of Agriculture
 - D. Geological Survey (USGS)
135. The first National Park established in the United States was:
- A. Grand Canyon
 - B. Smoky Mountain
 - C. Yellowstone
 - D. Yosemite
136. Outgrowths which cause trees to grow in irregular patterns that result in beautifully grained woods are called:
- A. Burls
 - B. Forbs
 - C. Junglones
 - D. Spalts
137. A “shake and bake” is a:
- A. Drip Torch
 - B. Fire Plow
 - C. Fire Shelter
 - D. Soil Dryer
138. Which of the following is a significant problem in nurseries that grow coniferous seedlings?
- A. Damping Off
 - B. Needle Cast
 - C. Pitch Canker
 - D. Slime Flux
139. Which of the following U.S. presidents created the CCC (Civilian Conservation Corps)?
- A. Dwight D. Eisenhower
 - B. Franklin D. Roosevelt
 - C. Theodore Roosevelt
 - D. Woodrow Wilson
140. Using containerized seedlings rather than bare root seedlings usually results in:
- A. A much shorter planting season
 - B. Easier handling and transportation
 - C. Improved rates of survival and growth
 - D. Lower initial cost for seedlings

Forestry CDE Questions Requiring Math Calculations

The formulas for these questions come from Forest and Forestry, 6th edition.

Problem 1

- A. Your company plans a prescription burn on a tract of land that is 20 chains by 10 chains. The cost of prescription burning in your area is \$5.00/acre. Under typical conditions, how much will it cost to prescription burn this tract of land?

a. \$ 15 b. \$ 100 c. \$ 500 d. \$ 1,000	must know: 1 acre = 10 square chains $20 \text{ chains} \times 10 \text{ chains} = 200 \text{ [sq. chains]}$ $(200 \text{ [sq. chains]}) / (10 \text{ [sq chains/acre]}) = 20 \text{ acres}$ $20 \text{ acres} \times \$5/\text{acre} = \$100.00$
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- B. You have a tract of land that is 30 chains by 25 chains. The cost to prescription burn this area is \$6/ acre. Under typical conditions, how much will it cost to prescription burn this area?

a. \$ 265 b. \$ 330 c. \$ 450 d. \$4500	must know: 1 acre = 10 chains ² $30 \text{ chains} \times 25 \text{ chains} = 750 \text{ chains}^2$ $(750 \text{ chains}^2) / (10 \text{ chains}^2/\text{acre}) = 75 \text{ acres}$ $75 \text{ acres} \times \$6/\text{acre} = \$450.00$
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Problem 2

- A. John's normal stride is 2.9 feet long. How many paces would he need to measure 3 chains?

a. b. 15 paces c. 30 paces d. 68 paces e. 72 paces	must know: 1 chain = 66 feet $3 \text{ chains} * 66 \text{ feet/chain} = 198 \text{ feet}$ $198 \text{ feet} / 2.9 \text{ (feet/pace)} = 68.3 \text{ paces}$ (round to 68 paces)
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- B. Tracy's normal stride is 3.3 feet. How many paces would she need to measure 2 chains?

a. 6.6 paces b. 26 paces c. 32 paces d. 40 paces	must know: 1 chain = 66 feet $2 \text{ chains} * 66 \text{ [feet/chain]} = 132 \text{ feet}$ $132 \text{ feet} / 3.3 \text{ [feet/pace]} = 40 \text{ paces}$
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Problem 3

- A. If you have 13 paces per chain, how many paces are in two miles?

a. 26 paces b. 208 paces c. 1,216 paces d. 2,080 paces	must know: 1 mile = 80 chains (5280 [ft]/66 [feet/chain]) $1 \text{ chain} = 13 \text{ paces}$ $1 \text{ mile} = 80 \text{ chains so } 2 \text{ miles} = 160 \text{ chains}$ $160 \text{ chains} \times 13 \text{ paces/chain} = 2,080 \text{ paces}$
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- B. If you have 11 paces per chain, how many paces are in 3 miles?

a. 642 paces b. 2,640 paces c. 4,062 paces d. 6,204 paces	must know: 1 mile = 80 chains 1 chain = 11 paces 3 miles = 240 chains 240 chains x 11 paces/chain = 2,640 paces
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Problem 4

A. If a tree farmer plants seedlings on a 12' x 12' spacing, he/she will plant _____ seedlings per acre.

a. 144 seedlings b. 288 seedlings c. 303 seedlings d. 426 seedlings	must know: 1 acre = 43,560 feet ² (12 feet x 12 feet) per seedling = 144 feet ² /seedling 43,560 feet ² /144 feet ² /seedling = 303 seedlings
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B. If a tree farmer plants seedlings on a 8' x 10' spacing, he/she will plant _____ seedlings per acre.

a. 544 seedlings b. 588 seedlings c. 608 seedlings d. 644 seedlings	must know: 1 acre = 43,560 feet ² (8 feet x 10 feet) per seedling = 80 square feet/seedling 43,560 square feet / 80 square feet/seedling = 544.5 seedlings (can't plant ½ seedling and you don't have enough space for another seedling. Therefore, round down)
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Problem 5

A. How many acres are in an area 25 chains long and 20 chains wide?

a. ½ acre b. 5 acres c. 50 acres d. 500 acres	must know: 10 chains ² = 1 acre 25 chains x 20 chains = 500 chains ² 500 chains ² /10 (chains ² /acre) = 50 acres
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B. How many acres are in an area 10 chains by 15 chains?

a. 10 acres b. 12 acres c. 14 acres d. 15 acres	must know: 10 square chains = 1 acre 10 chains x 15 chains = 150 square chains 150 square chains/10 (square chains/acre) = 15 acres
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