

Forestry

- 2 Best Management Practices include all of the following except:
- a) control of logging during wet seasons
 - b) removing tops of trees from streams
 - c) **allowing goats to graze in newly planted areas to protect seedlings from weed competition**
 - d) using buffers
- 4 Which of the following would be considered a public employment opportunity?
- a) **Bureau of Land Management**
 - b) Audubon Society
 - c) International Paper
 - d) Weyerhaeuser
- 6 Using a containerized seedling rather than bareroot seedlings usually results in:
- a) **improved rates of survival and growth**
 - b) lower initial cost for seedlings
 - c) easier handling and transportation
 - d) a much shorter planting season
- 7 Surveys of the boundaries of a timber tract are done to:
- a) **establish exact property lines**
 - b) determine stand classification
 - c) find the volume of timber on the tract
 - d) locate fences and firebreaks
- 10 The first consideration in using chemical pesticides should always be:
- a) **safety**
 - b) timing of the application
 - c) economic feasibility
 - d) ease of application
- 11 Which of the following pest management practices is categorized as a silvicultural method?
- a) Use conventional pesticides on a regular basis
 - b) **Harvest mature trees or stands**
 - c) Paint uninfested trees with wax
 - d) Utilize pheromones, repellants, and inhibitors
- 12 The most widely known and used hardwood is:
- a) Ash
 - b) **Oak**
 - c) Hickory
 - d) Maple

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- 13 The weight of the complete tree that can be used to produce energy is called:
- a) thermal unit
 - b) **biomass**
 - c) energy fuel value
 - d) energy flow
- 14 The oldest and most common method of remote sensing used in forestry is:
- a) ground cruise
 - b) thermal scan
 - c) **aerial photography**
 - d) electromagnetic radiation
- 15 John's normal pace is 3.9 feet long. How many paces would he need to measure three chains?
- a) 36
 - b) 66
 - c) **51**
 - d) 12
- 16 Which of the following is NOT considered a primary wood industry?
- a) pulp mill
 - b) plywood plant
 - c) **furniture manufacturing**
 - d) sawmill
- 18 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 slowest spreading of all fires
 - d) They are the most common type of forest fires
- 19 As a general rule, the market demand for hardwood:
- a) **varies between regions**
 - b) is greatest in the Southeast
 - c) has been declining at a steady rate since the 1980s
 - d) far exceeds that for softwood
- 21 Which of the following is NOT true with regard to the topographic Abney level?
- a) It is used to supplement slope tapes on very steep terrain
 - b) It contains a scale that directly corresponds to the correction graduations on a slope tape
 - c) It measures the angle between the horizontal plane and line of sight along the scope
 - d) **It is used primarily on normal terrain**

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- 22 A growth-removal ratio of 1:27 means that
- a) 27 trees were cut for every one tree planted
 - b) 27 trees were planted for every one tree cut
 - c) removal exceeded growth by 27 percent
 - d) **growth exceeded removal by 27 percent**
- 23 The current trend in Forest Service ecosystem management policy is:
- a) allocation of resources
 - b) **holistically assessing each situation**
 - c) clear cutting as much as possible
 - d) implementing geographical boundaries to separate various uses
- 24 Oriented Strand Board (OSB) is
- a) showing a rapid decline in the US
 - b) made from recycled plastic chips
 - c) **made from wood chips**
 - d) more expensive to produce than plywood veneers
- 25 Abnormal tissue growth on trees that is caused by insects or mites is called:
- a) pitch
 - b) fungus
 - c) conk
 - d) **gall**
- 26 Which of the following is NOT considered a naturally durable wood?
- a) **white pine**
 - b) white oak
 - c) black walnut
 - d) cedar
- 27 A standard cord of wood measures
- a) 160 cubic feet
 - b) 160 square feet
 - c) **128 cubic feet**
 - d) 128 square feet
- 28 Which of the following statements is true with respect to forest ecosystems?
- a) A disease outbreak is likely to do more damage to a mixed ecosystem than a single-species plantation
 - b) **The more diverse an ecosystem, the more resistant it is to insect damage**
 - c) A single-species plantation is more resistant to insect damage than a mixed one
 - d) One natural disaster in the stand will not result in a total loss in timber resources

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- 29 The life span of the adult gypsy moth is usually about:
- a) 1 day
 - b) **7 days**
 - c) 15 days
 - d) 45 days
- 30 The most damaging pollutant in the US is currently thought to be:
- a) lead
 - b) nitrates
 - c) zinc
 - d) **ozone**
- 31 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) **skidding**
 - c) felling
 - d) snagging
- 32 In rangeland management, an animal unit month (AUM) is
- a) the number of cattle grazing in a specific area for one month
 - b) the amount of organic fertilizer deposited by a 1,000 pound cow in one month
 - c) the number of cattle cold during one month
 - d) **the amount of forage needed to feed a 1,000 pound cow for one month**
- 33 The first chief of the United States Forest Service was:
- a) **Gifford Pinchot**
 - b) Franklin B. Hough
 - c) James Audubon
 - d) John McSweeney
- 34 A compass needle points to magnetic north, which is the same as:
- a) true north
 - b) 13,000 miles from true north
 - c) **1,300 miles from true north**
 - d) the North Pole
- 35 Removing trees that have been or may be killed or damaged due to insects, ice, fire, and other agents is called:
- a) sanitation cutting
 - b) liberation
 - c) pruning
 - d) **salvage cutting**

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- 36 Paper was first made from ground mulberry bark by the
- a) Incas
 - b) **ChineseAmerican**
 - c) Egyptians
 - d) Indians
- 37 Water contained within the cell wall in wood is called:
- a) **bound water**
 - b) free water
 - c) fiber water
 - d) suppressed water
- 38 When planting trees, a spacing of 8x8 feet will result in how many trees per acre?
- a) 340
 - b) **680**
 - c) 3400
 - d) 6800
- 39 Which of the following is not usually considered a part of fire management?
- a) prevention
 - b) presuppression
 - c) suppression
 - d) **regarding**
- 40 The most destructive of all forest insects are:
- a) gall mites
 - b) leaf feeders
 - c) plant-sucking mites
 - d) **borers**
- 41 Of all the environmental factors that influence the growth of trees, the most limiting is:
- a) soil quality
 - b) **moisture**
 - c) temperature
 - d) topograph
- 42 Which of the following is not a correct procedure to use in planting seedlings?
- a) Plant only one tree in a given spot
 - b) Plant seedlings in slightly deeper than they grew in the nursery
 - c) **Plant seedlings in an upright position, with the roots doubled up**
 - d) Always pack soil firmly around the roots

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- 44 Which of the following is not a common method of testing improved seeds or seedlings?
- a) **regulation testing**
 - b) provenance testing
 - c) clone testing
 - d) progeny testing
- 45 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) perennials, annual weeds, shrubs, young trees
- 46 The greatest amount of distortion on an aerial photograph occurs at the:
- a) left side of the photograph
 - b) right side of the photograph
 - c) center of the photograph
 - d) **edges of the photograph**
- 47 The Material Safety Data (MSD) sheet contains information about all of the following EXCEPT:
- a) chemical make-up
 - b) first aid instructions
 - c) **cost per application**
 - d) proper disposal
- 48 Which of the following careers would most likely involve managing timberland for private landowners?
- a) Research Forester
 - b) **Professional Consulting Forester**
 - c) Forest Engineer
 - d) Urban Forester
- 49 Maps that convert three-dimensional features into a two-dimensional representation are:
- a) contour
 - b) relief
 - c) raised-relief
 - d) **topographic**
- 50 A tree with a very heavy, strong, and durable wood that has a rich dark brown color is:
- a) hickory
 - b) maple
 - c) **walnut**
 - d) ash
- 51 The Federal agency that studies and monitors geology and publishes topographic maps is the:

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- a) **Geological Survey (USGS)**
 - b) Environmental Protection Agency
 - c) Department of the Interior
 - d) Department of Agriculture
- 52 The first National Park established in the United States was:
- a) Smoky Mountain
 - b) Grand Canyon
 - c) Yosemite
 - d) **Yellowstone**
- 53 Outgrowths which cause trees to grow in irregular patterns that result in beautifully grained woods are called:
- a) jugalones
 - b) forbs
 - c) **burls**
 - d) spalts
- 54 A "shake and bake" is a:
- a) **fire shelter**
 - b) drip torch
 - c) soil dryer
 - d) fire plow
- 55 Which of the following is a significant problem in nurseries that grow coniferous seedlings?
- a) slime flux
 - b) **damping off**
 - c) pitch canker
 - d) needle cast
- 56 Which of the following US Presidents created the CCC (Civilian Conservation Corps)?
- a) Dwight D. Eisenhower
 - b) **Franklin D. Roosevelt**
 - c) Theodore Roosevelt
 - d) Woodrow Wilson
- 57 Which of the following is an intangible product of forests?
- a) pine straw mulch
 - b) firewood
 - c) greenery used for decorations
 - d) **water quality**
- 58 Best Management Practices include which of the following?
- a) increased logging during wet seasons

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- b) **using buffers**
 - c) allowing goats to graze in newly planted areas
 - d) leaving dead trees in place so as not to disturb growth
- 59 Which of the following would be considered a public employment opportunity in forestry?
- a) Audubon Society
 - b) International Paper
 - c) Weyerhaeuser
 - d) **Army Corps of Engineers**
- 60 Which of the following shows pine grades from LEAST to HIGHEST value?
- a) **pulpwood, chip n' saw, veneer, saw timber, pole timber**
 - b) chip n' saw, pulpwood, saw timber, pole timber, veneer
 - c) pulpwood, chip n' saw, veneer, pole timber, saw timber
 - d) pulpwood, pole timber, chip n' saw, veneer, saw timber
- 61 Which of the following management practices would not be categorized as a silvicultural practice?
- a) harvest cuttings
 - b) **marketing timber**
 - c) intermediate cuttings
 - d) tree planting
- 62 Tia's normal pace is 3.2 feet long. How many paces will she need to measure three chains?
- a) 36
 - b) 51
 - c) 12
 - d) **62**
- 63 Which of the following is least likely to present a health hazard to forestry workers?
- a) terrain
 - b) heat
 - c) **air quality**
 - d) cold
- 65 The fastest spreading of all types of forest fires is :
- a) surface forest
 - b) **crown fires**
 - c) ground fires
 - d) deciduous fires
- 66 Transit, theodolite, and dumpy refer to types of:
- a) compasses
 - b) calipers

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- c) **levels**
 - d) stereoscopes
- 67 Which of the following is true with regard to fungal colonization?
- a) Usually, no serious damage results to infected trees
 - b) It cannot spread through the roots
 - c) It is easily controlled with a systematic fungicide
 - d) **Once begun, it cannot be controlled**
- 68 Gypsy moths cause the most damage to trees during which stage?
- a) **larval**
 - b) egg
 - c) pupal
 - d) adult
- 71 Pubescent of a leaf refers to:
- a) serrations on the margin
 - b) **hairiness**
 - c) color
 - d) veins
- 72 Basal area of a woodlot represents the:
- a) stand density
 - b) stand stocking
 - c) taper of a tree trunk
 - d) **area occupied by trees in square feet**
- 73 When using the "percent" scale on an Abney level, what distance should you be from a tree?
- a) 1 chain
 - b) 66 feet
 - c) **100 feet**
 - d) 10 paces
- 74 Tree seedlings from a nursery that are labeled 3-0:
- a) have a 3 inch tap root
 - b) are too young to plant
 - c) were grown 3 years in a transplant bed
 - d) **were grown 3 years in a seedbed**
- 75 The least accurate tool for determining the bearing of a line is:
- a) Transit
 - b) Hand compass
 - c) **GPS receiver**

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- d) Staff compass
- 76 The pine sawfly causes damage to what part of pine trees?
- a) Trunk/stem
 - b) **Needles**
 - c) Limbs
 - d) Twigs
- 77 Lenticels, terminal buds and nodes are helpful when using _____ for tree identification.
- a) Roots
 - b) Leaves
 - c) **Twigs**
 - d) Bark
- 78 The stem of a leaf is known as a:
- a) spine
 - b) blade
 - c) midrib
 - d) **petiole**
- 79 A large crowned tree with a short stem that takes up too much growing space is known as a:
- a) **wolf tree**
 - b) pretty tree
 - c) seed tree
 - d) cull tree
- 80 A tally system used with tally books is the:
- a) **10 dot tally system**
 - b) computer tally
 - c) systematic tally
 - d) three record system
- 81 Most pulpwood today is bought by:
- a) board feet
 - b) cunits
 - c) cords
 - d) **weight**
- 82 The forest industry buys most of their sawlogs using the:
- a) cunits
 - b) **Doyle rune**

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- c) Scribner rule
 - d) international scale
- 83 A 66' baseline is best used with a:
- a) **topographic clinometer**
 - b) percent clinometer
 - c) Hand compass
 - d) Staff compass
- 85 Most haul roads are designed with grades not exceeding ___ percent.
- a) **10**
 - b) 12
 - c) 15
 - d) 20
- 86 To keep mud out of streams near log landings, a _____ can be used.
- a) culvert
 - b) rotten log
 - c) ditch
 - d) **silt fence**
- 87 Wood boring insects can be detected by:
- a) sound
 - b) holes in the wood
 - c) sawdust on the log
 - d) **all of these**
- 88 A silviculturally sound treatment for dealing with wolf trees is:
- a) felling
 - b) **girding**
 - c) limbing
 - d) bucking
- 89 A widow maker is:
- a) a poorly maintained saw
 - b) a stem or limb bent under pressure
 - c) an overloaded log truck
 - d) **a tree lodged in another tree**
- 90 Lumber cut from pruned trees is usually:
- a) whiter in color
 - b) straighter grained
 - c) higher density

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- d) **knot free**
- 92 What factors are considered when determining optimum growing conditions?
- a) soil type
 - b) aspect
 - c) available moisture
 - d) **all of these**
- 93 What is the corresponding Azimuth reading of a bearing N 30 degrees W?
- a) 230 degrees
 - b) 187 degrees
 - c) **330 degrees**
 - d) 300 degrees
- 94 When scaling logs at a sawmill, the scaler usually combines log length (in feet) with _____ to determine board foot volume/
- a) Weight
 - b) Average DBH
 - c) Top height
 - d) **Average DIB, small end**
- 95 Where is the legal record of all land transactions found?
- a) book of legal documents
 - b) **deed book**
 - c) lien book
 - d) county ledger
- 97 A dot grid is used to determine the:
- a) miles
 - b) slope
 - c) board footage
 - d) **number of acres in a tract**
- 98 The width of a fire line is determined by:
- a) slope
 - b) amount of flash fuels
 - c) fuel moisture content
 - d) **all of these**
- 100 After finishing reading with a transit, and before moving to the next location, the following must be done:
- a) pull the hub
 - b) draw a sketch of the area including streams
 - c) **lock the needle firmly**

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- d) take a vertical reading
- 101 Two inch thick lumber is usually referred to as _____ at the sawmill.
- a) four quarter
 - b) five quarter
 - c) six quarter
 - d) **eight quarter**
- 103 On a topographical map, what is meant by the contour lines being close together?
- a) a depression
 - b) **very steep land**
 - c) a saddle
 - d) flat land
- 104 Kevlar is a material used in:
- a) **safety clothing**
 - b) surfactants
 - c) fertilizer
 - d) herbicide
- 105 The part of a tree that grows into a seed is called a(n):
- a) ovary
 - b) stamen
 - c) polyp
 - d) **ovule**
- 106 The separation between lobes on a leaf is a(n):
- a) perimeter
 - b) **sinus**
 - c) outline
 - d) serration
- 108 Which of the following methods of timber cruising uses a prism to determine what trees are to be measured?
- a) strip cruising
 - b) radius plot method
 - c) **variable plot**
 - d) fixed plot method
- 109 Which of the following is an energy intensive means of forest vegetation control?
- a) hand clearing
 - b) broadcast burn
 - c) spot treatment with herbicides
 - d) **machine clearing**

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- 110 Dutch Elm Disease is capable of damaging even healthy trees because:
- a) it is caused by air borne organisms and is impossible to control
 - b) **native species have little or no resistance to the disease**
 - c) it attacks the entire tree all at once
 - d) none of these
- 111 Herbicide damage may be indicated by:
- a) elongated cankers
 - b) tumor-like enlargements on the trunk
 - c) yellow to orange lesions on bark
 - d) **twisting of needles, stunted growth**
- 112 Plainsawed lumber is also called:
- a) radial sawed
 - b) **flat grained**
 - c) edge grained
 - d) quarterseed
- 113 The function of the xylem in the tree is to:
- a) produce carbohydrate through photosynthesis
 - b) grow wood and bark cells
 - c) develop leaves from nutrients
 - d) **conduct water and minerals to the crown**
- 114 Attacks by scales and aphids would result in:
- a) death by girdling
 - b) forked and crooked trees
 - c) **stunted tree growth**
 - d) defoliation
- 116 In measuring the site index of a tree, which criteria must be answered?
- a) merchantable height of DBH
 - b) age of a tree and merchantable height
 - c) **age of a tree and total tree height**
 - d) DBH and totally free height
- 117 The United States has approximately how many acres of forest land?
- a) 100 million
 - b) 245 million
 - c) 483 million
 - d) **728 million**

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119 Which of the following branches of the USDA do not have responsibilities associated with forestry?

- a) **Environmental Protection**
- b) State and Private Forestry
- c) Research and Experimental
- d) National Forest System

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120 A piece of equipment that helps navigate is sometimes referred to as a GPS. What do the letters GPS stand for?

- a) Ground Position System
- b) Ground Positioning System
- c) **Global Positioning System**
- d) Global Position System

122 What was the title of the federal program created in 1985 that was designed to help landowners plant trees and develop vegetative cover for erosion control?

- a) **Conservation Reserve Program**
- b) Cooperative Forestry Assistance Act
- c) National Environmental Policy Act
- d) Multiple Use Sustained Yield Act

123 Which of the following is NOT one of the four layers of forest?

- a) understory
- b) **forest ceiling**
- c) canopy
- d) emergent

124 What is the primary function of a vegetative filter or buffer strip?

- a) **Removes sediment**
- b) Removes pollution
- c) Removes fuel
- d) **all of these**

125 The majority of the world's wood is consumed for what purpose?

- a) paper
- b) building
- c) **fuel**
- d) none of these

128 The margin of the leaf can be used to identify many hardwood tree species. The margin is found on what part of the leaf?

- a) lenticels
- b) mid-rib
- c) petiole
- d) **blade**

129 What is the diameter of a tree if it has a circumference of 81.64 inches?

- a) **26.00 inches**
- b) 36.27 inches
- c) 47.39 inches

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- d) 81.64 inches
- 130 Which of the following tools can be used to determine the basal area?
- a) Wedge Prism, Dot Grid
 - b) Relaskop, Dot Grid
 - c) **Wedge Prism, Relaskop**
 - d) Log Rule, Dot Grid
- 131 What is the baseline distance when using a Biltmore stick?
- a) 50 feet
 - b) **66 feet**
 - c) 75 feet
 - d) 100 feet
- 132 What is the total Basal Area for a plot if 10 trees were tallied using a 10 factor wedge prism?
- a) 50 cubic feet per acre
 - b) 50 square feet per acre
 - c) **100 square feet per acre**
 - d) 100 cubic feet per acre
- 133 Today, most wood used for pulp and paper production is sold by the:
- a) **ton**
 - b) cord
 - c) thousand board foot
 - d) board foot
- 134 A tree can be aged by counting the annual growth rings. Which of the following tools can be used to accomplish this?
- a) Bark Gauge
 - b) **Increment Borer**
 - c) GPS
 - d) Ring Borer
- 135 What does GIS stand for?
- a) Global Information System
 - b) Global Interface System
 - c) **Geographic Information System**
 - d) Geographic Interface System
- 136 Uncut timber adjacent to a stream filters surface runoff and provides shade to keep water temperatures from rising. What are these uncut areas called?
- a) Wildlife Corridors
 - b) Stream Crossings
 - c) Stream Fords

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d) **Buffer Strips**

137 Which of the following bearings on a quadrant compass converts to 310 degrees on an azimuth compass?

- a) S10E
- b) N10W
- c) **N50W**
- d) S50E

138 Which of the following is NOT a prescribed action to maintain a healthy forest?

- a) Fertilizing the trees
- b) Using prescribed fire
- c) **Overstocking the stand**
- d) Planting genetically superior seedlings

140 What part of the tree does the nymph of the cicada feed on?

- a) trunk
- b) **roots**
- c) leaves
- d) flowers

141 Which disease of hardwoods enters the tree through the deep wounds caused by logging operations or fire?

- a) Annosus Root Rot
- b) Fusiform Rust
- c) Nectria Canker
- d) **Heart Rot**

142 How many cords of wood would there be in a stack 16 feet wide, 16 feet long, and 32 feet high?

- a) 14
- b) 24
- c) **64**
- d) 128

144 How many trees are required to plant 10 acres of land on a 6'x6' spacing?

- a) 11,000
- b) **12,100**
- c) 15,100
- d) 21,000

145 Which part of the tree carries water and nutrients upward?

- a) Phloem
- b) **Xylem**
- c) Heart

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- d) Cambium
- 146 The DBH of a tree is measured on the:
- a) low side
 - b) **high side**
 - c) perpendicular to the high side
 - d) ground level
- 147 What act was passed in 1971 to ensure that working conditions in the US are safe and healthful?
- a) Workplace Safety Act
 - b) Employee Health and Safety Act
 - c) **Occupational Safety and Health Act**
 - d) Occupational Hazard Reduction Act
- 151 Of the below choices, which is the most common reason for seizure (cylinder/piston failure) of a chainsaw?
- a) **Hole in the fuel line**
 - b) Dirty air filter
 - c) Letting the saw run as fast idle with the chain brake on
 - d) Using a non-resistor spark plug
- 168 The original forest cover of the United States was:
- a) 90,000 acres
 - b) 900,000 acres
 - c) 9,000,000 acres
 - d) **900,000,000 acres**
- 169 In Arizona, which species accounts for about 90% of all harvested timber?
- a) Douglas fir
 - b) **ponderosa pine**
 - c) cottonwood
 - d) aspen
- 170 Which of these agencies does not use the concept of multiple use?
- a) the U.S. Forest Service
 - b) the Bureau of Land Management
 - c) **the National Park Service**
- 171 Which of these is not one of the three main parts of a tree?
- a) the crown
 - b) the roots
 - c) **the culm**
 - d) the bole

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- 173 Which is the major limiting factor affecting growth in Arizona?
- a) soil chemistry
 - b) **moisture**
 - c) light intensity
 - d) the growing season
- 174 Which of the following species is a "softwood?"
- a) **Limber Pine**
 - b) Gambel Oak
 - c) Sugar Maple
 - d) Arizona Walnut
- 175 Arizona is included in which forest region?
- a) Northern
 - b) Central Hardwood
 - c) **Rocky Mountain**
 - d) Tropical
- 176 This harvest method removes all trees in an area:
- a) Shelterwood cut
 - b) **Clear cut**
 - c) Selective cut
 - d) Seed tree cut
- 177 A _____ tree has its crown extended above the rest.
- a) intermediate
 - b) co-dominant
 - c) suppressed
 - d) **dominant**
- 178 How many sections are in a township?
- a) 6
 - b) **36**
 - c) 63
 - d) 66
- 179 Loggers use the term "bucking" to refer to:
- a) cutting a tree down
 - b) **cutting a tree into sections, once it has been cut down**
 - c) cutting out the defective or rotten parts of the tree
 - d) a tree hitting the ground which then bucks like a horse
- 180 When working on steep ground a tree should ideally be felled:

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- a) downslope
 - b) **upslope**
 - c) across the slope
 - d) off a cliff
- 181 Which is not a forest product?
- a) sap
 - b) wood
 - c) resin
 - d) **ore**
- 183 Which of the following is not considered "slash?"
- a) unmerchantable tops
 - b) limbs
 - c) needles
 - d) **merchantable logs**
- 185 When using the topographic scale on an abney level at a distance of 66 feet and the readings are -4 to the base to the top of a tree, the total height is _____?
- a) 41 feet
 - b) **49 feet**
 - c) 82 feet
 - d) 98 feet
- 186 Removing a section of the outer and inner bark of a standing tree all the way around the bole is called:
- a) scaling
 - b) debarking
 - c) **girdling**
 - d) measuring the inside diameter
- 187 The term "site" as used in forestry is defined by many environmental factors. Which of the following is not a factor used to define a site?
- a) soil
 - b) climate
 - c) slope
 - d) **type of trees**
- 188 A fire which is caused by lightning would be:
- a) **wildfire**
 - b) broadcast burn
 - c) spot burn
 - d) back fire

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- 189 Which is not a forest insect?
- a) wood borers
 - b) bark beetles
 - c) leaf cutters
 - d) **fungi**
- 190 How many acres are there in one section?
- a) 160
 - b) 460
 - c) 600
 - d) **640**
- 191 To determine the yield or volume from a standing tree you must find out the _____ and _____ height.
- a) defect and usable
 - b) **diameter and usable**
 - c) defect and total
 - d) diameter and total
- 192 Looking at a tree's cross section shows that each ring is made up of a darker colored area called summerwood and a lighter area called:
- a) fall wood
 - b) darkwood
 - c) winterwood
 - d) **springwood**
- 193 Reproduction of trees by the copice method refers to:
- a) planting seedlings
 - b) **the sprouting of trees**
 - c) planting seeds
 - d) fertilizing before planting
- 194 Cutting trees out of an immature stand to promote the growth of the remaining trees is called:
- a) a rotation age cut
 - b) a salvage cut
 - c) **thinning**
 - d) a protection cut
- 195 A stand in which the trees are the same age or at least in the same age class is called:
- a) virgin stand
 - b) an uneven aged stand
 - c) two storied stand
 - d) **an even aged stand**

Forestry

- 196 Rotation age refers to the age when trees should be:
- a) harvested
 - b) **planted**
 - c) pruned
 - d) fertilized
- 197 A cut made for the primary purpose of removing trees that have been attacked by insects or disease is called a:
- a) selection cut
 - b) clear cut
 - c) **sanitation cut**
 - d) shelterwood cut
- 198 Which is a type of direct seeding?
- a) spot seeding
 - b) broadcast
 - c) strip seeding
 - d) **all of these**
- 199 Which is not an objective of prescribed burning?
- a) **killing extra seedlings**
 - b) fuel reduction
 - c) preparation of the seedbed
 - d) control of competing vegetation
- 200 Preparation of the seedbed could include: all of these burning disking fertilization
- 201 A "j rooted" seedling:
- a) has been planted in the J soil horizon
 - b) has blue jays nesting in the roots
 - c) has been planted at the correct depth
 - d) **the main root has upturned so the seedling looks like the letter "J"**
- 202 Dendrochronology is:
- a) measuring tree height with a dendrochronometer
 - b) using tree height and age for a site index
 - c) **dating history with tree rings**
 - d) a form of seedbed preparation
- 203 The practice of silviculture is concerned with:
- a) protection of the stand
 - b) method of reproduction
 - c) intermediate cuttings
 - d) **all of these**

Forestry

- 204 The area of the cells where the growth of a tree (diameter) takes place is the:
- a) pith
 - b) sapwood
 - c) heartwood
 - d) **cambium**
- 205 Which factor does not influence the loss of moisture from wood?
- a) humidity
 - b) temperature
 - c) **fire history**
 - d) air movement
- 206 Which is not a drying defect?
- a) twist
 - b) split
 - c) **knots**
 - d) crook
- 207 DBH is taken at what point on the tree?
- a) at 3.0 feet
 - b) at the breast height of the person measuring the tree
 - c) **at 4.5 feet**
 - d) at stump height
- 209 Which instrument is not used to measure diameter?
- a) D tape
 - b) **clinometer**
 - c) tree caliper
 - d) biltmore scale
- 210 This type of insecticide is taken up internally by the tree:
- a) brain poison
 - b) contact poison
 - c) bark poison
 - d) **systemic**
- 211 Is a piece of wood 12" x 12" x 2":
- a) one-half board foot
 - b) one board foot
 - c) **two board feet**
 - d) four board feet

Forestry

- 212 Which is located between the sapwood and the inner bark?
- a) pith
 - b) **cambium**
 - c) heartwood
 - d) outer bark
- 214 _____ products are the ones most commonly associated with forests.
- a) Food
 - b) Medicinal
 - c) **Wood**
 - d) none of the answers listed
- 215 _____ is the future of our forests.
- a) **Reforestation**
 - b) Planting
 - c) Farming
 - d) none of the answers listed
- 216 America's eastern forests were originally cleared to produce lumber for ships, logs for _____, and fields to be farmed.
- a) buildings
 - b) cabins
 - c) **homes**
 - d) hardwood
- 218 Clear-cutting can result in wide-scale _____ due to the unprotected soil.
- a) **erosion**
 - b) extraction
 - c) status
 - d) none of the answers listed
- 219 America's forests are _____ natural resources.
- a) finished
 - b) unrenovable
 - c) complete
 - d) **renewable**
- 223 Trees that are used for making paper are called _____.
- a) timber
 - b) **pulpwood**
 - c) lumber
 - d) veneer
- 230 The yearly demand for wood products in the United States is about _____ cubic feet.

Forestry

- a) **19 billion**
 - b) 23 billion
 - c) 190 billion
 - d) 253 million
- 231 In a woodlot with even-aged trees, the lot usually needs to be thinned when the trees are _____ years old.
- a) 1 to 5
 - b) 5 to 10
 - c) 10 to 15
 - d) **15 to 30**
- 232 Which of the following methods of reforestation has the lowest direct cost but is also the slowest method and the least reliable?
- a) direct seeding
 - b) **natural seeding**
 - c) coppice growth planting seedlings
 - d) planting cuttings
- 245 _____ species, sometimes called conifers, are trees that have leaves in the form of needles.
- a) Evergreen
 - b) Deciduous
 - c) **Softwood**
 - d) Hardwood
- 247 Which of the following is not a characteristic of ecosystems?
- a) Diversity
 - b) **Succession**
 - c) Zonation
 - d) Stratification
- 251 _____ is the process by which water vapor leaves a living plant and enters the atmosphere.
- a) Respiration
 - b) Photoperiodism
 - c) Circulation
 - d) **Transpiration**
- 253 _____ is considered the father of systematic botany.
- a) **Linnaeus**
 - b) Pinchot
 - c) Dubiel
 - d) Hasiotis

Forestry

- 254 On deciduous trees, _____ is the most important identification feature in the dormant winter period.
- a) twigs
 - b) **bark**
 - c) leaves
 - d) fruit
- 255 If a cord of firewood cost \$200, how much would a stack of wood measuring 4' x 6' x 8' cost?
- a) \$200
 - b) \$250
 - c) **\$300**
 - d) \$312
- 256 A _____ is the most accurate tool for measuring tree diameters.
- a) tree caliper
 - b) **diameter tape**
 - c) wedge prism
 - d) biltmore stick
- 257 A _____ removes all injured, diseased, or vulnerable trees in a stand, regardless of their merchantability.
- a) **sanitation cutting**
 - b) clear cutting
 - c) shelterwood cutting
 - d) seed tree cutting
- 258 Which is not a factor affecting the success or failure of direct seeding?
- a) Bird Populations
 - b) Vegetative Cover
 - c) **Temperature**
 - d) Soil Moisture
- 259 If Mr. Brown plans to plant 15 acres of Longleaf Pine seedlings on 6 feet x 10 feet intervals, how many seedlings per acre will Mr. Brown plant?
- a) 544
 - b) 680
 - c) **726**
 - d) 908
- 260 As a rule, only about ____ to ____ percent of all properly planted seedlings will survive.
- a) 65/70
 - b) 70/75
 - c) **75/80**

Forestry

d) 80/85

261 If the specific gravity of wood is expressed as 0.56, and a cubic foot of water weighs 62.5 pounds, how much would a cubic foot of wood weigh?

- a) 33 pounds
- b) **35 pounds**
- c) 37 pounds
- d) 39 pounds

262 If an undried sample of Southern Pine sample weighed 10 ounces and the same sample once dried weighed 8 ounces, what would be the moisture content of the sample?

- a) 20%
- b) 23%
- c) **25%**
- d) 30%

264 Round timbers, generally driven into the ground to support other structures and generally pressure-treated with creosote are called

- a) poles
- b) **piling**
- c) cross-ties
- d) mine timber

265 Which of the following has not resulted in a sharp reduction in the damage caused by forest fires?

- a) More adequately trained personnel
- b) Improved knowledge of forest fires
- c) **Global Warming**
- d) Better equipment

267 What are four types of roots in a complete root system?

- a) **Tap root, lateral roots, fibrous roots, deeply descending roots**
- b) Tap root, lateral roots, deeply descending roots, cambium
- c) Root cap, lateral roots, fibrous roots, deeply descending roots
- d) Tap root, lateral roots, fibrous roots, root hairs

268 When measuring diameter breast height of a tree with a Biltmore Stick, how many inches from the eye is the stick held?

- a) 21 inches
- b) 24 inches
- c) **25 inches**
- d) 30 inches

269 How many board feet are in a 2 inch x 12 inch x 24 inch Southern Pine board?

Forestry

- a) 2.5 board feet
 - b) 3.5 board feet
 - c) **4 board feet**
 - d) 4.5 board feet
- 270 A helicopter can direct seed as many as _____ acres per day.
- a) 1,500
 - b) 1,800
 - c) 2,250
 - d) **2,500**
- 271 Which of the following is not an advantage of planting seedlings?
- a) Complete control over the species
 - b) **Initial investment is high**
 - c) Fast erosion control
 - d) Control of tree spacing
- 272 The American Forest Institute says there are four steps in developing a good forest management program. Which of the following is not a proper step in developing a good forest management program?
- a) **Becoming a certified tree farm**
 - b) Decide on your objectives
 - c) Develop a plan
 - d) Analyze the situation
- 273 Which of the following is a biological control of forest insects?
- a) Selective harvesting
 - b) Planting of resistant varieties
 - c) **Introduction of a predator**
 - d) Application of pesticides
- 274 Which of the following is not a cause of noninfectious disease?
- a) Ice damage
 - b) Air pollution
 - c) Drought damage
 - d) **Parasites**
- 275 _____ is the most violent and dangerous type of forest fires.
- a) **Crown fire**
 - b) Surface fire
 - c) Ground fire
 - d) none of the answers listed
- 276 Which of the following is not a factor affecting the anatomy of fire?

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- a) Natural barriers
- b) **Ignition point**
- c) Slope
- d) Moisture

277 When felling a tree, a _____ removes a wedge of wood from the side where the logger wants the tree to fall.

- a) Front cut
- b) Back cut
- c) Over cut
- d) **Undercut**

Forestry

- 278 _____ refers to a leaf being shaped like a heart.
- a) Rhomboid
 - b) Elliptic
 - c) **Cordate**
 - d) Deltoid
- 280 All of the following are determined by measuring basal area EXCEPT...
- a) timber volume calculations
 - b) the degree of stocking of a stand of trees
 - c) the amount of timber to remove in thinning an overstocked stand
 - d) **the height of a particular tree**
- 281 Generally speaking, a technician is someone who has majored in forestry and has graduated from a _____.
- a) **technical school**
 - b) high school
 - c) 4 year college
 - d) Post-Bachelorette program
- 282 Sunlight, carbon dioxide and water produce carbohydrates through a process known as
- a) Oxidation
 - b) Inspiration
 - c) **Photosynthesis**
 - d) Respiration
- 283 Controlled fire can be used for all but the following:
- a) **public relations**
 - b) hazard reduction
 - c) site preparation
 - d) hardwood control
- 285 How many acres are in an area 20 chains long by 20 chains wide?
- a) 20
 - b) **40**
 - c) 400
 - d) 640
- 287 Immediately outward from the cambium are the living cells called the inner bark, or
- a) **phloem**
 - b) annual ring
 - c) xylem
 - d) sapwood

Forestry

- 288 Magnetic declination is the
- a) amount of local attraction
 - b) **angle between true and magnetic**
 - c) angle between true and magnetic AND amount of local attraction
 - d) none of the answers listed
- 289 The contour interval on a topographic map indicates the difference in elevation represented by
- a) different types of contour lines
 - b) elevation at a specific point
 - c) elevation of a general area
 - d) **adjoining contour lines**
- 290 The basal area per acre is _____ if one has tallied 8 trees with a 10 factor prism.
- a) 8 sq. ft
 - b) **80 sq. ft**
 - c) 80 sq. inches
 - d) 800 sq. ft
- 291 Which of the following is not a disadvantage of natural regeneration?
- a) Less control of spacing and stocking
 - b) No genetic improvement
 - c) **Low cost establishment**
 - d) Generally lower yield
- 292 _____ is the portion of the fire from which air is moving away. This portion of the fire is moving slowest and is burned over.
- a) **Rear**
 - b) Head
 - c) Flank
 - d) none of the answers listed
- 293 The relative humidity range for most prescribe burns should be from _____ to _____.
- a) 25%/35%
 - b) **30%/60%**
 - c) 30%/50%
 - d) 40%/60%
- 295 Tissue found at the tips of roots and at the ends of stems responsible for the increase of the length of a plant
- a) Annual ring
 - b) meristem
 - c) pistil
 - d) **Apical Meristem**

Forestry

- 296 The layer of one year as viewed from a cross section of stem, branch or root
- a) **Annual ring**
 - b) crusing
 - c) landing
 - d) spacing
- 297 A hand tool used in making a hole in the soil where a tree can be planted
- a) plantation
 - b) seedling survival
 - c) **planting bar (dribble)**
 - d) Apical Meristem
- 298 A state of being free of danger and injury
- a) xylem
 - b) spacing
 - c) **safety**
 - d) Forestry
- 299 The male sex cell
- a) ovule
 - b) xylem
 - c) pace
 - d) **pollen**
- 300 The process by which plants produce glucose
- a) Anther
 - b) **photosynthesis**
 - c) township
 - d) pistil
- 303 Timbers in the around usually used to support power or
- a) choker
 - b) mile
 - c) piling
 - d) **telephone lines poles**
- 304 640 acres or a 1 mile square
- a) petiole
 - b) **section**
 - c) pistil
 - d) rotation
- 305 An event that happens unexpectedly or unintentionally

Forestry

- a) stamen
 - b) chain
 - c) piling
 - d) **accident**
- 307 A classification method for trees, plants and animals using scientific names and Latin terminology
- a) trunk
 - b) safety
 - c) Cambium
 - d) **taxonomy**
- 308 The chance that an accident might occur during a research project
- a) Leaf
 - b) mile
 - c) **Risk**
 - d) cord
- 309 The measurement of the diameter of a tree from 4 1/2 feet above ground on the uphill side
- a) GIS
 - b) **DBH**
 - c) cord
 - d) CDE
- 310 Estimating a volume of standing timber
- a) spacing
 - b) piling
 - c) **crusing**
 - d) felling
- 311 Machinery used to pull logs from the stump to the landing
- a) **skidder**
 - b) mile
 - c) suckers
 - d) Anther
- 312 A type of leaf that consists of a petiole and two or more leaf blades called leaflets
- a) copperage
 - b) simple leaf
 - c) **compound leaf**
 - d) pollen
- 313 A pore in plant leaf allowing for the exchange of gases
- a) **stomata**

Forestry

- b) biomass
 - c) stigma
 - d) style
- 314 A site where logs are gathered to haul them to a sawmill
- a) acre
 - b) pace
 - c) **yard**
 - d) Leaf
- 335 The United States grows 10% of the World's forest, harvests less than 8% of the world's wood and wood fiber and from this produces _____ of the World's forest products
- a) 10%
 - b) **25%**
 - c) 50%
- 336 In 1630, there was an estimated one billion acres of forest land in the United States. That number dramatically dropped to 759 million acres when measured in 1907. What do you think the most recent figure is?
- a) 389 million acres
 - b) **747 million acres**
 - c) 903 million acres
- 337 Eleven percent of U.S. western forests are legislatively reserved and protected from logging. What percent of eastern U.S. forests are withdrawn from timber production and utilization?
- a) **3%**
 - b) 8%
 - c) 12%
- 338 Only about 5% of private forest landowners have a written management plan on their forest. The survey shows _____ of private forest acreage is under management using a written plan
- a) nearly 20%
 - b) **nearly 40%**
 - c) nearly 60%
- 339 The Western United States has only 3.6% of forest area in planted forests while eastern forests have just over _____ of forest acreage in plantations.
- a) **10%**
 - b) 30%
 - c) 50%
- 340 After intensive logging between 1870 and 1920, _____ of the Nation's forests grow trees that are less than 50 years old.
- a) 33%

Forestry

- b) **55%**
- c) 85%

341 There is more wood today in American forests than there was in 1953. The cubic foot increase of wood growing in these forests over the last 60 years has been _____.

- a) **26%**
- b) 66%
- c) 106%

342 Unfortunately, U.S. tree mortality (trees dying naturally in any given year) is higher now than at any other time over the last 60 years. Natural causes of death take nearly _____ of the forest's trees annually.

- a) **1%**
- b) 10%
- c) 50%

343 Forest planting in the United States currently averages about _____ acres per year

- a) 700,000
- b) 1.4 million
- c) **2.4 million**

345 Abney level

- a) **measures heights**
- b) measures relative flatness
- c) measures tree diameter

346 Accretion is

- a) **the amount of tree growth**
- b) the amount of tree
- c) stem straightness
- d) the amount of tree bark loss

347 Afforestation is

- a) tree mortality in large contiguous areas
- b) removing trees from specific geologic regions
- c) **planting trees on non-forested land**

348 Attrition mill is

- a) a planer
- b) **a hog**
- c) a veneer mill

349 Aspect

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- a) the direction of the sun
 - b) a tree's "sun facing" position
 - c) **he direction a slope faces**
- 350 Abscission
- a) **leaf separation from tree**
 - b) a tree bole scar
 - c) root grafting to neighboring trees
- 351 Back Cut
- a) saw kickback
 - b) a final pulpwood harvest
 - c) **final cut when felling a tree**
- 352 Backfire
- a) fire escaping over an established fireline
 - b) **deliberate fire used to slow wildfire**
 - c) that portion of the wildfire behind the fire crew
- 353 Basal Area
- a) patch of wild, herbaceous material
 - b) the butt log portion of a tree
 - c) **cross sectional area of a tree**
- 354 Biltmore Stick
- a) a peavy
 - b) **timber measuring device**
 - c) a stick used to separate drying lumber
- 355 Boom
- a) a logging bridge
 - b) a log loading device
 - c) **a log raft**
- 356 Bole
- a) **trunk of a tree**
 - b) a tree damaging mammal
 - c) the forward part of a log raft
- 357 Check
- a) **a separation of wood during seasoning**
 - b) a stopper when grading standing timber
 - c) a final lumber grading technique

Forestry

- 358 Cant
- a) the opposite of can
 - b) **a large unfinished wood slab**
 - c) a treated wood tie
- 359 Chip-n-saw
- a) **a dual product process that saws small stems**
 - b) a single product process that saws small stems
 - c) an antique sawmill
- 360 Cleavability
- a) tendency of wood to rot
 - b) **tendency of wood to split**
 - c) tendency of wood to warp
- 361 Concentration yard
- a) **area where logs are unloaded for further processing**
 - b) area where lumber is graded
 - c) forested area where trees will be logged
- 362 Coppice
- a) to remove small limbs
 - b) **cutover area**
 - c) an unforested rock outcrop
- 363 Deciduous
- a) light-loving trees
 - b) shade loving trees
 - c) **trees that lose their leaves**
- 364 Delignification removal of a wood cell substance using chemicals
- a) removal of a wood cell
 - b) **removal of tree bark**
 - c) substance by freezing
- 366 DBH
- a) **diameter breast height**
 - b) done been had
 - c) dimension board hardness
- 367 Doyle rule
- a) **a log scale that overruns small logs**
 - b) a log scale that underruns small logs

Forestry

- c) a board grading rule
- 368 Dote
- a) an unfinished board
 - b) **an early stage of wood decay**
 - c) trunk of a tree
- 369 Eremacausis
- a) **slow decay of exposed outside wood**
 - b) root rot
 - c) shearing of wood fibers along the grain
- 370 Even-aged
- a) lumber seasoned at an even temperature
 - b) **a stand of timber of the same age**
 - c) a stand of timber planted in even years
- 371 Exotic
- a) an unfamiliar plant
 - b) a tree that shows little contrast between springwood and summerwood
 - c) **a non-native plant**
- 372 Evergreen
- a) wood alcohol
 - b) **a conifer or narrow-leaved tree**
 - c) a volatile shrub
- 373 Epicormic branching
- a) branching patterns formed by shade
 - b) disease inhibited branches
 - c) **shoots growing rapidly from mainstem buds**
- 374 Edge effect
- a) **a healthy habitat condition positioned between two ecosystems**
 - b) a positive tree response to early season planting
 - c) a harmful biotic condition located at the edge of two ecotypes
- 375 Face Cut
- a) notch facing away from tree fall
 - b) notch made at each buck point
 - c) **notch facing direction of tree fall**
- 376 False Ring

Forestry

- a) the winter ring
 - b) extra ring counted reading a tree core
 - c) **an extra ring added in the same growing season**
- 377 Fluted butt
- a) **asymmetrical and muscled bole**
 - b) symmetrically tapered butt
 - c) a noisy logger
- 378 Four-quarter
- a) a stud
 - b) **a nominal 1 inch thick board**
 - c) a quartersawn board
- 379 Forb
- a) a true grass
 - b) **a non-grass herbaceous plant**
 - c) a woody stemmed plant
- 380 Fusiform rust
- a) **pine disease resulting in a canker**
 - b) hardwood disease resulting in defoliation
 - c) skidder frame deterioration
- 381 Genus
- a) a hand-logging jack
 - b) a smart forest owner
 - c) **a group of similar species**
- 382 Greenchain
- a) the forest cycle
 - b) a series of tree plots
 - c) **lumber moving belt**
- 383 Gymnosperm
- a) a tree with fleshy fruit
 - b) **a naked seeded tree**
 - c) a deciduous tree
- 384 Geotropism
- a) **growth stimulated by gravity**
 - b) growth stimulated by light
 - c) growth stimulated by soil nutrients

Forestry

- 385 Gyppo
- a) a forest soil amendment
 - b) **an independent contract logger**
 - c) a lumber freighting system
- 387 Hackmatack
- a) a commercial tree injector
 - b) *Celtis occidentalis*
 - c) **Larix laricina**
- 388 Hammermill
- a) **a fiber manufacturing machine**
 - b) a wood handle mill
 - c) a hammer manufacturer
- 389 Hardboard
- a) **an interfelted wood panel**
 - b) dense cardboard
 - c) a hardwood board
- 390 Hectare
- a) 12,000 square meters
 - b) **2.47 acres**
 - c) 3.23 acres
- 391 High grading
- a) taking an equal mix of good and poor trees
 - b) taking only the worst trees
 - c) **taking only the best trees**
- 392 Heterophyllous
- a) **different leaf shapes on same tree**
 - b) single reproductive part on same tree
 - c) several reproductive parts on same tree
- 394 Increment borer
- a) an inner-bark beetle
 - b) **tool used to extract tree cores**
 - c) tool used to mark log lengths
- 395 Indigenous
- a) **a native tree**
 - b) an introduced tree

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- c) a shade tolerant tree
- 396 Ips
- a) a turpentine beetle
 - b) a defoliator
 - c) **an engraver beetle**
- 397 Ingrowth
- a) **passing an arbitrary minimum diameter**
 - b) putting on annual rings
 - c) passing on a genetic flaw
- 398 Indeterminate growth
- a) apical meristem results in a flower
 - b) sporadic annual growth
 - c) **apical meristem remains vegetative**
- 399 Kerf
- a) a logging chain
 - b) **the width of a saw cut**
 - c) the dust cut out by a saw
- 400 Kiln
- a) a pine beetle control tool
 - b) a Scots logging uniform
 - c) **a wood seasoning chamber**
- 401 Kraft
- a) **a heavy paper or paperboard**
 - b) maple syrup candy
 - c) a container made of paper
- 402 Knuckleboom
- a) **a loading boom**
 - b) a hand operated bow saw
 - c) a bucking saw
- 403 KG Blade
- a) a tree injection tool
 - b) **a dozer-mounted site prep blade**
 - c) a felling chainsaw blade

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404 Katydid

- a) **a big-wheeled log mover**
- b) a major forest insect pest
- c) a female sawyer

405 Landing

- a) winching logs uphill
- b) the act of skidding logs
- c) **a collecting point for logs**

406 Late Wood

- a) **summerwood**
- b) the last cut logs of a harvest
- c) dead trees

407 Leave Tree

- a) a deciduous tree
- b) **a tree left on purpose (for further management)**
- c) a tree left by mistake (logger oversight)

408 Lignin

- a) **a by-product of pulping**
- b) an important part of photosynthesis
- c) a paper component

Forestry

- 409 Lump-sum Sale
- a) **a sale where trees are bought before cutting**
 - b) a sale where trees are bought after cutting
 - c) a sale where tree logs are auctioned off
- 410 Lovely fir
- a) Balsam fir
 - b) **Pacific silver fir**
 - c) Grand fir
- 411 Mensuration
- a) **measuring timber**
 - b) collecting leaf samples
 - c) taking forest soil tests
- 412 Merchandiser
- a) **a mechanical log-handling and sorting system**
 - b) a plant that converts cants to dimension lumber
 - c) a forestry consultant that handles timber sales
- 413 MMBF
- a) thousand board feet
 - b) **million board feet**
 - c) hundred board feet
- 414 Misery Whip
- a) a skidder cable
 - b) a 66 foot land-measuring chain
 - c) **a hand-powered crosscut saw**
- 415 Merchantable
- a) **trees with usable volume and suitable for sale**
 - b) trees with potential volume for future sale
 - c) trees not suitable for sale
- 416 Monoculture
- a) growing a tree crop for a single product
 - b) **growing one species of similar-aged trees**
 - c) growing a mixture of tree species
- 417 Naval Stores
- a) **chemicals extracted from wood**
 - b) wood product exports

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- c) mast-head warehouses
- 418 Nominal Size
 - a) the exact board size
 - b) **the approximate board size (usually over)**
 - c) the approximate board size (usually under)
- 419 Normal Forest
 - a) a multi-species forest
 - b) a poorly stocked forest
 - c) **a fully stocked forest**
- 420 Nitrogen-fixing
 - a) **legumes**
 - b) grasses
 - c) mesophytes
- 421 Node
 - a) region where limbs are attached
 - b) region where roots are attached
 - c) **region where leaves are attached**
- 422 Nyssaceae
 - a) **the tupelo family**
 - b) the alder family
 - c) the hemlock family
- 423 Overrun
 - a) amount of estimated volume over the actual lumber cut
 - b) overcutting a forest
 - c) **amount of actual lumber cut over the estimated volume**
- 424 Overstory
 - a) all foliage that excludes light
 - b) **forest canopy that reduces light to smaller trees**
 - c) foliage just over the forest litter layer
- 425 OSB
 - a) **Oriented Strand Board**
 - b) Oxidation Stained Board
 - c) Oregon Spruce Board
- 426 Oven Dry

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- a) **0% board moisture content**
 - b) 5% or less board moisture content
 - c) 10% or less board moisture content
- 427 On the Stump
- a) value of a market tree
 - b) felled timber to be bunched
 - c) **timber not yet felled**
- 428 Opposite
- a) leaf with two or more natural shapes
 - b) **leaf directly across from another leaf on stem**
 - c) leaf directly underneath another leaf on stem
- 429 Peckerwood
- a) **a small second-growth log**
 - b) tree cavity-loving bird
 - c) worm-eaten boards
- 430 Peeler
- a) a debarked log
 - b) **a veneer log**
 - c) a small but merchantable log
- 431 Pickaroon
- a) a feller-buncher
 - b) a feller-forwarder
 - c) **sharp tool used to move logs**
- 432 Phloem tissue made of
- a) **tubes that move food**
 - b) cork-producing tissue of a tree
 - c) sapwood
- 433 Picea
- a) Pine
 - b) Fir
 - c) **Spruce**
- 434 Petiole
- a) stem
 - b) **Leaf**
 - c) Leaf rib Leaf tip

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- 435 Quartersawn lumber is milled with rings at
- a) **45 to 90 degree angles to board surface**
 - b) always at right angles to board surface
 - c) parallel to board surface
- 436 Quadrangle
- a) an aerial photograph mosaic
 - b) **a 1:24,000 scaled topographic map**
 - c) a standard measure of land with four or more unequal sides
- 437 Quaggy
- a) lumber riddled with bird-peck
 - b) timber riddled with insect burrows
 - c) **timber riddled with shake in the center**
- 438 Quercus
- a) **Oaks**
 - b) Plums
 - c) Maples
- 439 Quarter girth
- a) **British measure of log circumference to compute volume**
 - b) a measure of radially sawn lumber
 - c) British measure of log radius to compute volume
- 440 Quebec Pine
- a) Pinus ponderosa
 - b) Pinus strobus
 - c) **Pinus resinosa**
- 441 This tree depends on fire for species survival
- a) Spruce Pine
 - b) **Longleaf Pine**
 - c) Yellow Poplar
- 442 Fire is always
- a) destructive
 - b) **neither**
 - c) constructive
- 443 Fuel reduction by prescribed fire
- a) **can be extremely beneficial if performed at appropriate intervals**
 - b) is extremely dangerous and should not be used

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- c) is now illegal to perform in 38 states
- 444 Prescribed fire is
- a) used regularly in both hardwood and pine ecosystems
 - b) is never used in stands of trees under 20' tall
 - c) **mainly limited to coniferous forests**
- 445 To improve wildlife, a prescribed burn should be made during
- a) spring
 - b) summer
 - c) **winter**
 - d) fall
- 446 Why should you burn in the summer?
- a) **for vegetative control**
 - b) to increase forage for animals
 - c) you should never burn in the summer
- 453 This ownership category plants the most US acreage
- a) non-industrial private
 - b) **forest industry**
 - c) National Forest System
 - d) none of the answers listed
- 454 The number of seedlings grown in the US nurseries
- a) **one and a half billion**
 - b) 30 billion
 - c) 100 million
 - d) 200 million
- 455 Acres of trees that were planted last year
- a) **2.6 million acres**
 - b) 5.2 million acres
 - c) 8.3 million acres
 - d) over 20 million acres
- 456 This US Region planted the most trees last year
- a) the Northeast
 - b) the Pacific Northwest
 - c) **the South**
 - d) the Southwest
- 457 This state had the largest nursery production last year

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- a) **Georgia**
 - b) Oregon
 - c) North Carolina
 - d) Mississippi
- 458 The National Forest System planted this acreage last year
- a) **159,000 acres**
 - b) 1,590,000 acres
 - c) 590,000 acres
 - d) 259,000 acres
- 459 The key factor in seedling survival is
- a) seedling handling
 - b) planting temperature
 - c) **available moisture**
 - d) none of the answers listed
- 460 Frozen seedlings should be discarded
- a) **be used if slowly thawed**
 - b) help to prepare for winter planting
 - c) none of the answers listed
- 461 Mechanical planting is
- a) equal to a hand planting job
 - b) **the preferred way to plant a seedling**
 - c) less desirable than hand planting
 - d) none of the answers listed
- 462 Seedling should be planted
- a) after November 15 but before February
 - b) after August 15 but before December
 - c) after October 15 but before February
 - d) **after December 15 but before April**
- 463 Seedling root pruning by the planter
- a) **can reduce moisture uptake**
 - b) can stimulate root growth
 - c) is an economical way to fit root to planting hole
 - d) none of the answers listed
- 464 Trees should be planted
- a) immediately
 - b) **as soon as possible**
 - c) only after cold storage

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- d) in one month
- 465 A forest's most important nutrient is
- a) water
 - b) minerals
 - c) **nitrogen**
 - d) none of the answers listed
- 466 A major process in supplying essential elements back to the soil is
- a) hygroscopic leaching
 - b) xerophytic decomposition
 - c) **nitrofaction**
 - d) none of the answers listed
- 467 The water supply in a forest determines site quality and/or potential productivity
- a) TRUE
 - b) **FALSE**
 - c) oh yeah!
 - d) none of the answers listed
- 468 Atmospheric nitrogen is
- a) the second most important way a tree gets N₂
 - b) **useless for direct plant use**
 - c) only a minor part of the earth's atmosphere
 - d) none of the answers listed
- 469 Mycorrhizal fungi infections
- a) **can enhance soil to tree nitrogen uptake**
 - b) have no effect on nutrient uptake
 - c) can inhibit organic nitrogen uptake by trees
 - d) none of the answers listed
- 470 A silvicultural system that enhances transfer of nutrients is
- a) a slow burn
 - b) a hot burn
 - c) windrowing
 - d) **thinning and pruning**
- 471 Over the last five years 50% of all softwood sawmill closures occurred in
- a) **British Columbia**
 - b) the U.S. West
 - c) the U.S. South
 - d) the U.S. North

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- 472 Softwood mills have been increasing lumber production primarily by
- a) improved utilization technology
 - b) **mill upgrades**
 - c) finding new sources of timber
 - d) none of the answers listed
- 473 Since 1995, the North American softwood lumber industry has experienced a
- a) **net loss of 39 mills**
 - b) net loss of 129 mills
 - c) net gain of 11 mills
 - d) net gain of 5 mills
- 474 The most common use for sawmill utilized softwood is
- a) pulpwood
 - b) pulpwood and mdf
 - c) industrial lumber like millwork/furniture
 - d) **dimension/construction lumber**
- 475 The best resource for raw material for treated lumber is the
- a) the redwood forest
 - b) the doug fir forest
 - c) **southern yellow pine forest**
 - d) none of the answers listed
- 476 The state with the best softwood stumpage prices is
- a) South Carolina
 - b) **Oregon**
 - c) Maine
 - d) North Carolina
- 477 The first four year school with a forestry curriculum
- a) Yale
 - b) **Cornell**
 - c) Rutgers
 - d) Harvard
- 478 He establishes the first forestry school at Biltmore
- a) Brandis
 - b) **Schenck**
 - c) Fernow
 - d) Williams
- 479 The first president of the Society of American Foresters (SAF)

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- a) **Pinchot**
 - b) Weyerhaeuser
 - c) Roosevelt
 - d) Schmidt
- 480 The first state to register foresters
- a) **Georgia**
 - b) Oregon
 - c) Maine
 - d) North Carolina
- 481 The first year in which a state forester registration was enacted
- a) 1910
 - b) 1933
 - c) **1951**
 - d) 1948
- 482 The year the Association of Consulting Foresters (ACF) was formed
- a) **1948**
 - b) 1950
 - c) 1952
 - d) 1954
- 483 Witch-Hazel is in this genus
- a) Ilex
 - b) Betula
 - c) **Hammamelis**
 - d) none of the answers listed
- 484 American elm is in this genus
- a) Nyssa
 - b) **Ulmus**
 - c) Zelcova
 - d) none of the answers listed
- 485 American beech species name
- a) cladistris
 - b) coccinea
 - c) **grandifolia**
 - d) none of the answers listed
- 486 A tree with opposite branching
- a) oak
 - b) hickory

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- c) **ash**
 - d) maple
- 487 River birch is in this genus
- a) Ulnus
 - b) **Betula**
 - c) Alnus
 - d) Zelcova
- 488 Boxelder species name
- a) acer
 - b) carya
 - c) **negundo**
 - d) coccinea
- 489 What product does a chip-n-saw operation produce?
- a) construction grade lumber
 - b) chips
 - c) **both chips and construction grade lumber**
 - d) none of the answers listed
- 490 Why do mills use sprinklers on logs?
- a) **to prevent blue stain**
 - b) to encourage easier sawing wood
 - c) to keep wood weights high
 - d) none of the answers listed
- 491 What are "dirty" chips?
- a) chips used in an illegal gambling game
 - b) all chips before the washing process
 - c) **chips in need of extra bleaching**
 - d) none of the answers listed
- 492 Wood shake is
- a) a board
 - b) roof decking material
 - c) a siding board
 - d) **wood separation at the annual rings**
- 493 A flitch is
- a) a birch arrow shaft
 - b) **a sawn log used for slicing veneer**
 - c) wood staking material
 - d) remanufactured trim

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- 494 Fines are
- a) remanufactured trim
 - b) **sawdust byproduct**
 - c) inferior hardwood lumber
 - d) wood staking material
- 495 How much gross wood is in a cord of stacked roundwood?
- a) 160 cubic feet
 - b) 4.53 cubic meters
 - c) **128 cubic feet**
 - d) 118 cubic feet
- 496 How many feet in a chain?
- a) 33 feet
 - b) **66 feet**
 - c) 100 feet
 - d) 166 feet
- 497 A thousand board feet of pine weighs approximately
- a) **15,000 pounds**
 - b) 18,000 pounds
 - c) five tons
 - d) 23,000 pounds
- 498 A good white oak site index is
- a) 52 feet
 - b) **79 feet**
 - c) 205 feet
 - d) 179 feet
- 499 The square dimension of a 1/10 acre plot is
- a) 43,560 inches
 - b) 28.5 meters
 - c) **66 feet**
 - d) 33 feet
- 500 What is the apical meristem?
- a) a dormant shoot
 - b) **stem elongation tissue**
 - c) an epicormic shoot
 - d) an unexpanded shoot or flower

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- 501 A bud
- a) **an unexpanded shoot or flower**
 - b) is a drinking buddy
 - c) is your favorite beer
 - d) none of the answers listed
- 502 The annual shoot is
- a) a rural fire department fundraiser
 - b) a whorl of new growth
 - c) **growth from bud scar to terminal bud**
 - d) an unexpanded shoot or flower
- 503 Geotropism is
- a) **a plant's upright growth**
 - b) potential plant nutrient availability
 - c) a chemical stimulating shoot growth
 - d) a whorl of new growth
- 504 Tree diameter is determined by the
- a) **vascular cambium**
 - b) phloem and xylem
 - c) auxins
 - d) plant nutrient availability
- 505 To "rogue out" seedlings means to
- a) get rid of genetically poor trees
 - b) cull out weeds in a nursery bed
 - c) **find extraordinary tree growth rates**
 - d) none of the answers listed
- 506 What is a samara?
- a) **winged fruit**
 - b) sheathed seed
 - c) seed with a husk
 - d) tree log
- 507 A deciduous tree
- a) has needles
 - b) never sheds leaves
 - c) **sheds leaves annually**
 - d) shed leaves twice a year
- 508 A leaf sinus is

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- a) the leaf base
 - b) **an indentation between leaf lobes**
 - c) an organ for respiration
 - d) midrib of the leaf
- 509 A petiole is the
- a) the leaf base
 - b) midrib of the leaf
 - c) margin of the leaf
 - d) **leaf stalk**
- 510 Fall leaf color is determined by
- a) moisture
 - b) auxins
 - c) chlorophyll
 - d) **lack of chlorophyll**
- 511 A leaf is sessile when
- a) attached with a stem to a twig
 - b) **attached directly to a twig**
 - c) leaf fall occurs
 - d) none of the answers listed
- 512 He wrote US preservation book Man and Nature
- a) Jeremy Belknap
 - b) Richard T. Ely
 - c) **George Perkins Marsh**
 - d) George Bird Grinnell
- 513 He helped found The Audubon Society and The Boone and Crocket Club
- a) Richard T. Ely
 - b) Charles Sprague Sergeant
 - c) Charles V. Hallock
 - d) **George Bird Grinnell**
- 514 He was the first federal Forestry Division "agent" for the Department of Agriculture
- a) Eugene Hale
 - b) **Franklin Hough**
 - c) Frederick Watts
 - d) Bernhard E. Fernow

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- 515 He was the first head of the United States Forest Service
- a) Elers Koch
 - b) Bernhard E. Fernow
 - c) **Gifford Pinchot**
 - d) Franklin Hough
- 516 He was The Sierra Club founder
- a) Frederick Watts
 - b) Elihu Root
 - c) Abbot Kinney
 - d) **John Muir**
- 517 He wrote the first US Forest Service Wilderness Plan
- a) **Aldo Leopold**
 - b) Frank Pooler
 - c) Francis B. Sumner
 - d) John Muir
- 518 A common name for ginkgo is
- a) ladies streamer
 - b) initial tree
 - c) **stink-bomb tree**
 - d) witch-hazel
- 519 A close ginkgo relative is
- a) initial tree
 - b) catalpa
 - c) witch-hazel
 - d) **has no close relative**
- 520 Ginkgo leaf extract is said to
- a) **aid memory**
 - b) improve sight
 - c) shrink hemorrhoids
 - d) aid hearing
- 521 Ginkgo, according to the fossil record, appeared as a species
- a) a million years ago
 - b) 25 million years ago
 - c) fifty million years ago
 - d) **200 million years ago**
- 522 Ginkgo is a native of

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- a) Australia
 - b) the African Congo
 - c) **eastern Asia**
 - d) South America
- 523 Ginkgo is considered to be
- a) an angiosperm
 - b) **a gymnosperm**
 - c) virtually fruitless
 - d) none of the answers listed
- 524 Which of the following is not a common topographic map scale?
- a) 1:100,000 scale, 1 inch represents about 1.6 miles
 - b) 1:250,000 scale, 1 inch represents about 4 miles 7.5 minute
 - c) **1:63,360 scale, 1 inch represents 1 mile**
 - d) 1:24,000 scale, 1 inch represents 2,000 feet
- 525 The total environment of a tree is a complex integration of physical and biological elements. Which of the following is a biological element?
- a) Air movement
 - b) **Fungi**
 - c) Precipitation
 - d) Soil texture
- 526 Farmer Brown has stacked firewood 4 feet high, 4 feet wide and 100 feet long. How many cords has he stacked?
- a) 8.5 cords
 - b) 10.5 cords
 - c) **12.5 cords**
 - d) 14 cords
- 527 What is the scientific name of Douglas Fir?
- a) **Pseudotsuga menziesii**
 - b) Taxodium distichum var. distichum
 - c) Picea glauca
 - d) Pinus ponderosa
- 528 According to the Homelite Owner's Manual, an operator should move a chainsaw at least _____ feet from the fueling point before starting the engine.
- a) 20
 - b) **30**
 - c) 40
 - d) 50

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- 529 Which statement is true about carrying a chainsaw?
- a) Engine stopped, guide bar/chain to the rear, muffler away from body
 - b) Engine stopped, brake engaged, guide bar/chain to the front
 - c) **Engine stopped, brake engaged, guide bar/chain to the rear, muffler away from body**
 - d) none of the answers listed
- 530 The trunk grows in diameter by means of cell division in the
- a) **Cambium Layer.**
 - b) Outer bark.
 - c) Roots.
 - d) Heartwood.
- 531 Identify the tool: 76" Diameter in inches, 10ths on one side; 20' linear in feet, 10ths, 100ths on other side. 3/8" Wide line with claw hook. Handcrank rewind. Case dimensions: 3-1/2" x 1".
- a) **Diameter Tape**
 - b) Logger's Tape
 - c) Bark Gauge
 - d) Hip Chain
- 532 Which statement is correct?
- a) Species, genus, family, order, division, kingdom
 - b) Division, kingdom, order, genus, species, family
 - c) **Kingdom, division, order, family, genus, species**
 - d) Kingdom, order, division, family, genus, species
- 533 All scientific names of plants consists of two _____ words, first the genus name, followed by the species name.
- a) German
 - b) Greek
 - c) Spanish
 - d) **Latin**
- 534 Identify the tool: Attaches directly to a quart can without the need for an adapter. Made of lightweight but extremely strong material that keeps your hand warmer in the winter than metal models. Comes with reversible, self-cleaning .021" nickel-finished nozzle.
- a) Tally Meter
 - b) **Tree Marking Gun**
 - c) Hypo-Hatchet
 - d) Drip Torch
- 535 Who was the President of the United States when Gifford Pinchot became head of the United States Forest Service in 1905?
- a) William Taft

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- b) **Theodore Roosevelt**
 - c) Grover Cleveland
 - d) William McKinley
- 536 Which of the following is not a part of a mature tree trunk?
- a) **Lateral bark**
 - b) Heartwood
 - c) Inner bark
 - d) Outer bark
- 537 Identify an example of structural lumber from the list below.
- a) **Joists**
 - b) Wood for Cabinets
 - c) Wood for Millwork
 - d) Dimensional lumber
- 538 How many board feet are in a 2 inch x 4 inch board 36 inches long?
- a) 1
 - b) **2**
 - c) 3
 - d) 4
- 539 Which of the following is NOT a dendrometer?
- a) **Clinometer**
 - b) Diameter Tape
 - c) Biltmore Stick
 - d) Tree Calipers
- 540 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
- a) **liberation.**
 - b) thinning.
 - c) salvage cutting.
 - d) sanitation cutting.
- 541 _____ eat their way through the sapwood and heartwood of the tree.
- a) Bark borers
 - b) **Wood borers**
 - c) Defoliators
 - d) Tip feeders
- 542 Which of the following is not a noninfectious disease?
- a) Acid rain
 - b) Sunscald

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- c) **Fungi**
 - d) Flood damage
- 543 Which of the following is not an advantage of livestock grazing in forests?
- a) **Soil compaction**
 - b) Reduce fire hazard
 - c) Natural fertilizer
 - d) Control hardwoods
- 544 Most forest fuels have ignition temperatures of _____ degrees to _____ degrees.
- a) 200; 450
 - b) 400; 660
 - c) **600; 880**
 - d) none of the answers listed
- 545 Which type of forest fire is the easiest to control?
- a) Ground fire
 - b) Crown fire
 - c) Brush fire
 - d) **Surface fire**
- 546 When planting trees, a spacing of 8 x 9 feet will result in how many trees per acre?
- a) 340
 - b) **605**
 - c) 825
 - d) 1015
- 547 Aphids excrete a clear, sugary liquid called
- a) **honeydew.**
 - b) conks.
 - c) manna.
 - d) plant benign cancer.
- 548 _____ embraces a multi-managerial system that includes municipal watersheds, wildlife and fisheries habitats, outdoor recreational opportunities, landscape design and the future production of wood fiber as raw material.
- a) Timberland
 - b) Multiple-use Forest
 - c) **Urban Forestry**
 - d) Tree Farm System

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549 Another name for sapwood is

- a) Heartwood
- b) Cambium.
- c) **Xylem..**
- d) Phloem.

550 Pores on the underside of leaves are called

- a) Guard Cell.
- b) **Stomata.**
- c) Epidermis.
- d) Cuticle.

551 The _____ bears the flower's pollen, which fertilizes the pistil, resulting in development of the fruit.

- a) **Anther**
- b) Calyx
- c) Corolla
- d) Filament

552 Which of the following is an example of Angiospermae?

- a) Cedar
- b) **Aspen**
- c) Douglas Fir
- d) Hemlock

553 _____ is small, dry, one-seeded, and unwinged, but often hairy.

- a) Capsule
- b) Samara
- c) **Achene**
- d) Nut

554 Which species of tree leaves do not turn red in autumn?

- a) **Cottonwood**
- b) Red Oak
- c) Sweet Gum
- d) Maple

555 John's step factor is 2.2 feet. How many steps does John take to measure the distance of one chain?

- a) 25 steps
- b) 28 steps
- c) **30 steps**
- d) Not enough information

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556 A tree measures 14 inches at DBH and is 10.9 inches in diameter inside the bark at the top of the first 16 foot log. What is the form class for this tree?

- a) 0.774
- b) 1.27
- c) **78**
- d) 127

557 _____ - shorter, smaller-crowned trees extending just into the general canopy level and receiving little direct sunlight from above.

- a) **Intermediate**
- b) Dominant
- c) Codominant
- d) Overtopped

558 Which forest range type requires the least amount of acres to support a cow during grazing periods?

- a) Shortleaf-Loblolly-Hardwood Type
- b) **Longleaf-Slash Pine Type**
- c) Upland Hardwood Type
- d) none of the answers listed

559 A 2" x 6" x 13' Maple board weighed 48 ounces when cut. When dried, the same board weighed 36 ounces. What was the moisture content of the board?

- a) 25%
- b) 28%
- c) **33%**
- d) 36%

560 _____ is the process of removing limbs and cutting the tree stem into log or bolt lengths.

- a) Felling
- b) **Bucking**
- c) Loading
- d) Skidding

561 Which statement is not true about coal-tar creosote?

- a) Insoluble in water
- b) **Corrodes metal**
- c) Chemical composition is inconsistent
- d) Toxic to fungi and insects

562 _____ include working for major wood-based corporations and for marketing and consulting firms or environmental organizations.

- a) Self-employment

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- b) Urban employment
 - c) Public employment
 - d) **Private employment**
- 563 Which of the following is not a harvest cutting?
- a) **Sanitation Cutting**
 - b) Clear Cutting
 - c) Seed Tree Cutting
 - d) Shelterwood Cutting
- 564 A tree has a 13.1 inch diameter. Using a 2 inch diameter class, determine the diameter.
- a) 10
 - b) 12
 - c) 13
 - d) **14**
- 565 A tractor, mechanical planter and a two-person crew can set out _____ to _____ seedlings per day on suitable sites.
- a) 9,000; 12,000
 - b) **7,000; 10,000**
 - c) 3,000; 6,000
 - d) 4,000; 8,000\
- 566 _____: pricing on the basis of so much per thousand board feet or cords.
- a) Load scale
 - b) Weight
 - c) **Tree scale**
 - d) Lump sum
- 567 Which species is non-porous?
- a) **Cedar**
 - b) Maple
 - c) Black Walnut
 - d) Ash
- 568 The study of insects and their relationship with the forest is called _____.
- a) Dendrology
 - b) Hydrology
 - c) Pathology
 - d) **Entomology**
- 569 A cant of wood that measures 12" x 12" x 40' contains _____ board feet.
- a) 40
 - b) 144

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- c) **480**
 - d) 5769
- 570 A snag is a _____. standing dead tree over 20'
- a) **blocked firebreak**
 - b) branch from one tree caught up in the branches from another tree
 - c) pinched chainsaw bar
- 610 What is the definition of bucking a tree mean?
- a) Directing the fall of a tree to a specific location
 - b) Removing its limbs
 - c) Hauling the tree to a loader
 - d) Cutting a tree from its stump
- 611 Which of the following is considered a non-capital asset?
- a) Skidder
 - b) **Chainsaw gas**
 - c) Timber
 - d) Land
- 612 What part of a timber sale contract depends on the harvesting objective?
- a) **Designation of the trees to be sold**
 - b) Preamble
 - c) Description of the sale area
 - d) Conditions of the sale
- 613 Which type chart helps set the declination on a compass?
- a) Agronomic
 - b) Latitude
 - c) Longitude
 - d) **Isogonic**
- 614 Why are herbicides used as a tool in forest management?
- a) **To control the growth of unwanted plants**
 - b) To speed up the development of the root systems of plants
 - c) To control the growth of the trees being grown for wood
 - d) To speed up the growth of the trees being grown for wood
- 615 _____ is the science of the interrelationships of organisms to their total environment.
- a) Forestry
 - b) **Ecology**
 - c) Biology
 - d) Pathology

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- 616 _____ cause abnormal tissue growths on any part of a plant.
- a) Leaf feeders
 - b) Borers
 - c) **Gall insects and mites**
 - d) Plant-sucking insects and mites
- 617 Identify the correct way to mix two cycle engine oil and gasoline.
- a) **Add 1/2 of desired amount of gas, then oil, mix, and add remaining gasoline**
 - b) Add 1/2 of desired oil, then gas, mix, and add remaining oil
 - c) Add engine oil, then gasoline, and mix contents
 - d) Add gasoline, then oil, and mix contents
- 618 _____ is a binocular instrument used to view overlapping aerial photographs in three dimensions.
- a) Planimeter
 - b) **Stereoscope**
 - c) Altimeter
 - d) Hand Lens
- 619 Which of the following is not a factor affecting felling direction?
- a) Wind direction
 - b) Lean of tree
 - c) Bend
 - d) **Direction of dead branches**
- 620 The ability of a soil to supply water and nutrients is strongly related to its _____.
- a) Structure
 - b) Texture
 - c) Depth
 - d) **All of the answers listed**
- 621 The _____ carries food made in leaves down to the branches, trunk and roots.
- a) **Phloem**
 - b) Heartwood
 - c) Xylem
 - d) Cambium
- 622 If a cord of firewood cost \$150, how much would a stack of wood measuring 4' x 8' x 8' cost?
- a) 150
 - b) 250
 - c) **300**
 - d) 320

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623 Which of the following is not a result of soil acidification, which is caused by atmospheric pollution?

- a) **Decreases soluble aluminum in soil**
- b) Interferes with calcium uptake
- c) Reduces cambial growth
- d) Reduces leaf area

624 If Mr. Fletcher plans to plant 45 acres of Longleaf Pine seedlings on 8 feet x 12 feet intervals, how many seedlings per acre will Mr. Fletcher plant?

- a) 96
- b) 432
- c) **454**
- d) 544

625 When fuel burns, it reacts with oxygen from the surrounding air releasing heat and generating combustion products. This process is known as _____.

- a) **Oxidation**
- b) Pyrophoric
- c) Pyrolysis
- d) Deflagration

626 Flowering in Eastern Hemlock is _____ with the flowers in separate clusters on the same branch.

- a) Dioecious
- b) Complete
- c) Androecious
- d) **Monoecious**

627 How many board feet are in a 14 feet x 18 inch x 1 inch Black Walnut board?

- a) 1.9 board feet
- b) 2.1 board feet
- c) 21 board feet
- d) **252 board feet**

628 Berry, Drupe and Pome are types of _____.

- a) Dry Fruits
- b) **Fleshy Fruits**
- c) Aggregate Fruit
- d) Multiple Fruit

629 _____ is cut parallel to the radius of the log.

- a) Endgrain-sawn wood
- b) Plain-sawn wood

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- c) **Quarter-sawn wood**
 - d) none of the answers listed
- 630 What type of leaf arrangement does a Pecan tree possess?
- a) Whorled
 - b) **Alternate**
 - c) Opposite
 - d) Simple
- 631 Which of the following is not true about Oriented Strand Board (OSB)?
- a) Insect Resistant
 - b) No internal gaps or voids
 - c) Water Resistant
 - d) **Continuous Grain**
- 632 _____ is any plant capable of invading bare ground of a drastically disturbed area.
- a) Climax Species
 - b) **Pioneer Species**
 - c) Native Plant
 - d) none of the answers listed
- 633 _____ is the capacity of a tree to develop and grow in the shade while in competition with other trees.
- a) Reproduction
 - b) Tracheids
 - c) **Tolerance**
 - d) Toughness
- 634 Which of the following factors is NOT used to determine the merchantable value of a standing tree?
- a) Diameter
 - b) Merchantable height
 - c) Volume of board feet
 - d) **Age of tree**
- 635 How many cubic inches of lumber are in one board foot?
- a) 48
 - b) 96
 - c) **144**
 - d) 147
- 636 Which of the following is not a way that forests protect water quality?
- a) **Releasing nutrients**
 - b) Shading water

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- c) Stabilizing banks
- d) Filtering pollutants

637 _____ is a release treatment aimed at freeing favored trees of weeds, climbers, or grasses or from less desirable trees of the same age which overlap them or are likely to do so.

- a) Selection Thinning
- b) **Cleaning**
- c) Clearcutting
- d) Crown Thinning

638 _____ is the productive capacity of a site for a given tree species.

- a) Site Index
- b) Site Prep
- c) Silviculture
- d) **Site Quality**

639 The terminal bud is found at the end of the _____.

- a) **twig or branch**
- b) individual leaf structure
- c) flower
- d) stamen

640 Soil with a pH of 4.0 is considered _____.

- a) alkaline
- b) **acidic**
- c) neutral
- d) none of the answers listed

641 In which of the following conditions would Amber glass wedge prisms be more useful than Clear glass prisms?

- a) at night
- b) in bright sunlight
- c) **in low light and hazy conditions**
- d) in extremely cold weather

642 Convulsions, secretions from nose and ears, loss of consciousness and inability to breathe are symptoms of _____.

- a) Smoke inhalation
- b) Heat stroke
- c) Hypothermia
- d) **Severe pesticide poisoning**

643 If you are traveling at an azimuth reading of 215 you are heading _____.

- a) **Southwest**

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- b) Southeast
 - c) Northwest
 - d) Northeast
- 644 For which of the following would an insecticide be used?
- a) Wetwood/slime flux
 - b) **Aphids**
 - c) Needle cast
 - d) Damping off
- 645 To estimate the height of a tree use a/an _____.
- a) Diameter tape
 - b) Bark gauge
 - c) **Clinometer**
 - d) Increment borer
- 646 Which of the following tree species has compound leaves?
- a) Black Cherry
 - b) Eastern Cottonwood
 - c) **Hickory**
 - d) Lodgepole Pine
- 647 A soil profile is made up of different soil layers called _____.
- a) grades
 - b) **horizons**
 - c) strata
 - d) none of the answers listed
- 648 Smooth and serrated are terms used to describe leaf _____.
- a) apices and bases
 - b) surfaces
 - c) shapes
 - d) **margins**
- 649 How many acres are a plot of land that measures 1000' x 1500'?
- a) 11.44
 - b) 18.44
 - c) 26.44
 - d) **34.44**
- 650 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 +85%; the bottom reading is -5%. What is the height of the tree?
- a) 75'
 - b) 80'

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- c) 85'
 - d) **90'**
- 651 The part of a logging operation in which logs are dragged from where they were cut to a central location for loading is called _____.
- a) **skidding**
 - b) bucking
 - c) felling
 - d) snagging
- 652 *Quercus falcata* is the scientific name for _____.
- a) Scarlet Oak
 - b) White Oak
 - c) Black Oak
 - d) **Southern Red Oak**
- 653 A tree with a well-developed crown extending above the other crowns is considered _____.
- a) **dominant**
 - b) mature
 - c) co-dominant
 - d) intermediate