

- 10) Landscaping for the purpose of minimizing water use by urban landscapes is called _____.
a) urban landscaping b) desertscaping
c) aridscaping d) xeriscaping
e) zeroscaping
- 11) As humidity increases transpiration _____.
a) increases b) decreases
c) does not change
- 12) Which of the following is the most effective method to minimize transpiration of cuttings during propagation?
a) spray with antitranspirants b) harden-off cuttings
c) place in intermittent mist system d) place in shaded location
e) all work equally well
- 13) Which outdoor irrigation system is used for row crops where the water is channeled between the rows?
a) ebb & flow b) drip
c) flood d) basin
e) furrow
- 14) Which greenhouse irrigation system places the plants in containers on a moist pad on a bench and the plants absorb water through holes in the bottom of the pot?
a) capillary mat b) chapin system
c) ebb & flow d) drip
e) flood
- 15) What is the name of the electric valve used to turn-on and turn-off automated irrigation systems?
a) modulator b) gate valve
c) thermostat d) comptroller
e) solenoid
- 16) In a soil profile, which horizon is also called the parent material?
a) A b) B
c) C d) D
e) E
- 17) An impermeable layer in the soil due to a high iron content is called a _____.
a) hard pan b) plow pan
c) bedrock d) heavy metal pan
e) clay pan
- 18) Most soils of the world are _____ (e.g. the most common type of soil found in nature).
a) mineral soil b) peat soil
c) muck soil d) humic soil
e) potting soil
- 19) Which type of soil is the source of the peat moss used in growing media?
a) mineral soil b) peat soil
c) muck soil d) humus soil
e) none are correct, peat moss is not obtained from a soil

- 30) Tensiometers are instruments that are inserted in the soil to measure _____.
a) soil moisture tension b) temperature
c) nutrient content d) organic matter content
e) psychological stress
- 31) Which will be cooler: the soil under a clear plastic mulch or under a black plastic mulch?
a) black plastic b) clear plastic
- 32) Which of the following IS NOT a benefit or use of mulches?
a) increases run-off of water b) decreases water loss by evaporation
c) decreases weed growth d) stabilizes soil temperature
e) all are benefits or uses of mulches
- 33) Which of the following is an essential element that is naturally supplied by air or water?
a) K b) Ca
c) Mo d) C
e) Cu
- 34) Which of the following is mobile?
a) Zn b) B
c) Ca d) Mn
e) K
- 35) Which of the following is more available at an intermediate pH?
a) P b) N
c) K d) Mo
e) Ca
- 36) Which of the following is the best (most economical) purchase? A 50 pound bag of 5-10-5 fertilizer for \$10.00 a bag, or a 50 pound bag of 10-15-10 fertilizer for \$15.00 a bag.
a) the 5-10-5 fertilizer b) the 10-15-10 fertilizer
- 37) A 12-16-8 fertilizer contains ____ N.
a) 12% b) 16%
c) 8% d) 36%
e) 64%
- 38) Which of the following would be the best fertilizer for my wife to use to fertilize her flowering geraniums? (and yes my wife likes her geraniums to flower a lot)
a) 20-20-20 b) 20-10-10
c) 10-20-20 d) 20-10-5
e) hey buddy, they would all work equally well in causing your wife's geraniums to flower
- 39) Of all the nutrients, which of the following is required by plants in the smallest quantities?
a) Cu b) B
c) Mn d) Mo
e) S
- 40) What is the main reason why nitrate nitrogen is so easily leached from the soil?
a) because it is very soluble b) because it is negatively charged
c) because it is volatile d) because it is positively charged
e) because moss don't grow on a rolling stone

NAME _____ SIGNATURE _____

HORT 201 – EXAM 3

Carefully mark answers on the scantron. Only answers marked on the scantron will be graded.

- 1) _____ is the shrinkage of individual cells due to loss of turgor pressure that causes a cell to become flaccid.
 - a) wilting
 - b) osmosis
 - c) plasmolysis
 - d) shrinkage
 - e) deflation
- 2) The driving force for growth in size, by causing expansion, is _____.
 - a) osmosis
 - b) cell division
 - c) mitosis
 - d) turgor pressure
 - e) gibberellic acid
- 3) Which method of expressing humidity is the amount of water vapor in air expressed as a percentage of the amount of water vapor that could be held at saturation?
 - a) relative humidity
 - b) vapor pressure
 - c) absolute humidity
 - d) barometric pressure
 - e) specific humidity
- 4) When warm air rises in the atmosphere, its temperature _____ and its humidity _____.
 - a) decreases / decreases
 - b) increases / decreases
 - c) increases / increases
 - d) decreases / increases
- 5) What type of precipitation happens if condensation occurs below freezing (e.g. the dew point is below freezing)?
 - a) hail
 - b) snow
 - c) rain
 - d) dew
 - e) fog
- 6) What is the name of the major aquifer in central Texas that supplies much of the water for the San Antonio area?
 - a) Edwards
 - b) Ogallala
 - c) Colorado
 - d) Brazos
 - e) Bush
- 7) What is name of the non-functional (dead) xylem in the center of tree trunks, and which does not translocate water?
 - a) phloem
 - b) sapwood
 - c) heartwood
 - d) xylemwood
 - e) suberized endodermis
- 8) In the Cohesion Theory of translocation, transpiration causes a _____ pressure in leaves that causes the water to flow up stems.
 - a) positive
 - b) negative
- 9) What part of the root absorbs most of the water a plant takes up?
 - a) root tip
 - b) older roots
 - c) root epidermis
 - d) Casparian strip
 - e) root hairs

- 10) Which of the following will tend to decrease transpiration?
- a) waxy leaves
 - b) high humidity
 - c) low temperature
 - d) darkness for C3 and C4 plants
 - e) all will tend to decrease transpiration
- 11) Newly transplanted trees can be sprayed with which of the following to decrease their transpiration and increase their chance of survival?
- a) auxin
 - b) antitranspirant
 - c) ethylene
 - d) humectant
 - e) coatifier
- 12) What is the most commonly used irrigation system for turfgrass and lawns?
- a) sprinkler
 - b) basin
 - c) chapin tube
 - d) flood
 - e) drip
- 13) What type irrigation system is recommended for use in xeriscaping?
- a) sprinkler
 - b) basin
 - c) chapin tube
 - d) flood
 - e) drip
- 14) What is the name of the electrically operated valves used to automate irrigation systems?
- a) tensiometer
 - b) quantum sensor
 - c) solenoid
 - d) alternator
 - e) capacitor
- 15) Which of the following irrigation systems keeps the foliage dry and thus allows the plants to have less foliar disease?
- a) capillary mat
 - b) chapin tube
 - c) subirrigation
 - d) none keep the foliage dry
 - e) all keep the foliage dry
- 16) Which is the most fertile horizon in the soil?
- a) A
 - b) B
 - c) C
 - d) D
 - e) E
- 17) _____ is an impermeable layer in the soil due to high clay.
- a) hard pan
 - b) clay pan
 - c) pottery pan
 - d) plow pan
 - e) peter pan
- 18) A _____ soil contains less than 20% organic matter.
- a) humic
 - b) muck
 - c) mineral
 - d) peat
 - e) geologic
- 19) The highly decomposed, fine, amorphous organic matter in soil is called _____.
- a) humus
 - b) compostic
 - c) muck
 - d) peat
 - e) litter

- 42) Which nutrient forms pectates in the middle lamella of cell walls and helps cement adjacent cells together?
- a) Cu
 - b) Ca
 - c) Mg
 - d) Zn
 - e) N
- 43) Which nutrient is a component of nucleic acids in DNA and RNA?
- a) P
 - b) B
 - c) S
 - d) Mo
 - e) K
- 44) Which term means yellowing of leaves?
- a) interveinal
 - b) jaundice
 - c) chlorosis
 - d) yellowing
 - e) necrosis
- 45) Which nutrient is needed by plants in the smallest quantities?
- a) Fe
 - b) B
 - c) Cu
 - d) Zn
 - e) Mo
- 46) Witches broom is an abnormality of pecan trees in Texas that is caused by a nutrient deficiency. Which nutrient?
- a) N
 - b) B
 - c) Zn
 - d) Ca
 - e) Mn
- 47) If a plant exhibits overall chlorosis of the older leaves, which nutrient is likely deficient?
- a) Mo
 - b) N
 - c) Mn
 - d) K
 - e) Mg
- 48) Which of the following can be both a Mg and a Ca fertilizer?
- a) urea
 - b) Epsom salt
 - c) gypsum
 - d) superphosphate
 - e) dolomite
- 49) Which of the following CANNOT be applied as a chelate?
- a) Fe
 - b) Mn
 - c) Cu
 - d) B
 - e) Zn
- 50) Which of the following is the source of C for plants?
- a) carbon dioxide
 - b) water
 - c) oxygen
 - d) air pollution
 - e) soil mineral particles