

# HORT 201 Quiz File - Exam 2

NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_

## HORT 201 – EXAM 2

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

- 1) Which was the first hormone discovered and identified in plants?
  - a) cytokinin
  - b) gibberellic acid
  - c) abscisic acid
  - d) ethylene
  - e) auxin
- 2) Cytokinin is primarily responsible for increasing which cellular process?
  - a) cytokinesis
  - b) cell elongation
  - c) respiration
  - d) photosynthesis
  - e) cell senescence
- 3) Which of the following is a synthetic auxin?
  - a) indoleacetic acid (IAA)
  - b) benzyladenine (BA)
  - c) naphthaleneacetic acid (NAA)
  - d) ethephon
  - e) zeatin
- 4) Growth retardants are used to produce florist quality flowering pot plants, because it causes them to be shorter, more compact and therefore more attractive. Growth retardants do this by blocking the synthesis of \_\_\_\_\_.
  - a) cytokinin
  - b) gibberellic acid
  - c) abscisic acid
  - d) ethylene
  - e) auxin
- 5) Which hormone may delay leaf aging or leaf abscission?
  - a) cytokinin
  - b) gibberellic acid
  - c) abscisic acid
  - d) ethylene
  - e) auxin
- 6) Where is the site of production of cytokinin?
  - a) shoot tips
  - b) root tips
  - c) plastids
  - d) aging flowers
  - e) wounded tissue
- 7) Which hormone can be used at low concentrations to cause fruit set in greenhouse tomatoes when there is poor pollination?
  - a) cytokinin
  - b) gibberellic acid
  - c) abscisic acid
  - d) ethylene
  - e) auxin
- 8) \_\_\_\_\_ is the response of plants to gravity?
  - a) thigmotropism
  - b) phototropism
  - c) geotropism
  - d) gravitropism
  - e) earthtropism
- 9) Two hormones can cause leaf abscission in plants. Which two?
  - a) auxin and cytokinin
  - b) gibberellic acid and ethylene
  - c) abscisic acid and auxin
  - d) ethylene and cytokinin
  - e) abscisic acid and ethylene







- 41) \_\_\_\_\_ is lack of color development due to exclusion of light, and is used on cauliflower.
- a) etiolation
  - b) blanching
  - c) light acclimatization
  - d) black clothing
  - e) photooxidation
- 42) Which type of plants are naturally best suited for use as indoor house plants?
- a) sun plants from the temperate region
  - b) sun plants from the tropical region
  - c) shade plants from the temperate region
  - d) shade plants from the tropical region
  - e) in does not matter, they all naturally make good house plants
- 43) At a light intensity below a plant's light compensation point, what is the relationship of photosynthesis to respiration?
- a) photosynthesis is greater than respiration
  - b) they are equal to each other
  - c) respiration is greater than photosynthesis
- 44) Which type plant has the lowest light compensation point?
- a) a sun plant
  - b) a shade plant
  - c) they both have the same light compensation point
- 45) In commercial greenhouse production of tropical foliage plants, which is the most commonly used method of light acclimatization?
- a) grow plants under reduced light intensity for the entire production time
  - b) grow plants in full sun, then give plants a final period of greatly reduced light
- 46) Light requiring seeds, such as some lettuce seeds, require their phytochrome to be in the Pfr form in order for them to germinate. Which of the following will trigger germination?
- a) red light
  - b) sun light
  - c) fluorescent lights
  - d) incandescent lights
  - e) all of the above will trigger them to germinate
- 47) Which type of light passes through the earth's atmosphere relatively unaffected (in other words it is not selectively absorbed) in the concept of the atmospheric window?
- a) ultraviolet light
  - b) infrared light
  - c) visible light
  - d) they are all affected (e.g. absorbed)
  - e) none are affected (e.g. none are absorbed)
- 48) A \_\_\_\_\_ plant exhibits its photoperiodic response when the photoperiod is longer than its critical photoperiod.
- a) short-day plant
  - b) long-day plant
  - c) day-neutral plant
- 49) Today sunrise was at 6:44 am and sunset will be at 6:29 pm. What is the photoperiod that plants will perceive today?
- a) 10 hours, 45 minutes
  - b) 11 hours, 15 minutes
  - c) 11 hours, 45 minutes
  - d) 12 hours, 15 minutes
  - e) 12 hours, 45 minutes
- 50) What is the recommended way to stop a short-day plant, such as poinsettia, from flowering during the winter?
- a) add light at the beginning of the night
  - b) add light in the middle of the night
  - c) add light at the end of the night
  - d) cover with black cloth to create long night
  - e) there is nothing you can do, it will flower regardless

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- 1) Which of the following is a naturally occurring cytokinin in plants?
  - a) indoleacetic acid (IAA)
  - b) indolebutyric acid (IBA)
  - c) zeatin
  - d) ethephon
  - e) benzyladenine (BA)
- 2) Which hormone is synthesized in the young leaves around the shoot tip?
  - a) cytokinin
  - b) auxin
  - c) abscisic acid
  - d) ethylene
  - e) gibberellic acid
- 3) Its about time to take fig root cuttings. Which hormone could I treat them with to stimulate them to form adventitious shoots?
  - a) cytokinin
  - b) auxin
  - c) abscisic acid
  - d) ethylene
  - e) gibberellic acid
- 4) If NASA tried to grow tomatoes on the space station, they would have a problem with poor pollination and fruit set (because there are no bees up there!). What would you recommend they spray the flowers with to cause fruit set?
  - a) cytokinin
  - b) auxin
  - c) abscisic acid
  - d) ethylene
  - e) gibberellic acid
- 5) Which hormone is a gas in its naturally occurring form?
  - a) cytokinin
  - b) auxin
  - c) abscisic acid
  - d) ethylene
  - e) gibberellic acid
- 6) There is only one naturally-occurring gibberellic acid in plants.
  - a) true
  - b) false
- 7) Which of the following IS NOT an effect or practical application of abscisic acid?
  - a) causes bud or seed dormancy
  - b) favors adventitious shoot formation
  - c) causes stomata to close in drought
  - d) causes leaf abscission
  - e) all are effects or practical applications of abscisic acid
- 8) Which hormone can be used to overcome bud dormancy in some temperate plants by substituting for a cold treatment, for example in greenhouse grown azaleas?
  - a) cytokinin
  - b) auxin
  - c) abscisic acid
  - d) ethylene
  - e) gibberellic acid
- 9) If you spray ethylene (as ethephon) on cantaloupe plants, which are monoecious, it will cause them to make more \_\_\_\_\_.
  - a) staminate flowers
  - b) pistillate flowers
  - c) perfect flowers
  - d) pretty little flowers
  - e) ugly little flowers

- 10) Carrots are biennials. Which hormone can be used on carrots to cause them to bolt and flower?
- cytokinin
  - auxin
  - abscisic acid
  - ethylene
  - gibberellic acid
- 11) The plastids, especially the chloroplasts, are the sites of production of which hormone?
- cytokinin
  - auxin
  - abscisic acid
  - ethylene
  - gibberellic acid
- 12) Which hormone can be used to delay leaf abscission?
- cytokinin
  - auxin
  - abscisic acid
  - ethylene
  - gibberellic acid
- 13) One of the major cellular effects of cytokinin is that it causes \_\_\_\_\_.
- cell epinasty
  - cell elongation
  - cell senescence
  - cell division
  - cell contraction
- 14) Geotropism is response to \_\_\_\_\_, and it is mediated by \_\_\_\_\_.
- touch / auxin
  - gravity / cytokinin
  - light / auxin
  - gravity / ethylene
  - gravity / auxin
- 15) What type hormone is 2,4-dichlorophenoxyacetic acid (2,4-D)?
- cytokinin
  - auxin
  - abscisic acid
  - ethylene
  - gibberellic acid
- 16) \_\_\_\_\_ is the amount of heat (heat energy) required to raise 1 gram of water by 1 °C.
- heat of fusion
  - British Thermal Unit (BTU)
  - heat of vaporization
  - calorie
  - specific heat
- 17) \_\_\_\_\_ is the flow of energy as electromagnetic waves, with no transferring medium.
- convection
  - radiation
  - electrophoresis
  - conduction
  - “Beam me up Scotty”
- 18) There is speculation that the earth’s average temperature is increasing due to global warming. Which gas is suspected to be the most probable cause?
- oxygen
  - ozone
  - water vapor
  - carbon dioxide
  - nitrogen
- 19) One way that plants cool themselves is by evaporating water from their leaves through transpiration. This relies on the high \_\_\_\_\_ of water.
- heat of vaporization
  - calorie
  - heat of fusion
  - specific heat
  - British Thermal Unit

- 20) What is the specific heat of water?
- 540 cal/g
  - 212 cal/g
  - 80 cal/g
  - 32 cal/g
  - 1 cal/g
- 21) When water freezes, it \_\_\_\_\_ the environment \_\_\_\_\_ cal/g of heat energy.
- absorbs from / 80
  - absorbs from / 540
  - releases into / 80
  - releases into / 540
  - no answer is correct, because freezing water does not absorb nor release heat energy
- 22) Which latitudes form the borders of the Temperate Climate Zone?
- 23 ½ degrees and 0 degrees
  - 23 ½ degrees and 23 ½ degrees
  - 23 ½ degrees and 90 degrees
  - 66 ½ degrees and 90 degrees
  - 23 ½ degrees and 66 ½ degrees
- 23) \_\_\_\_\_ is the current or temporary atmospheric conditions.
- weather
  - climate
  - climatic zone
  - atmospheric pressure
  - solstice
- 24) As you go north and south from the equator, the average temperature drops because the: 1) sun's rays are spread over a greater area, and 2) sun's rays must pass through a thicker layer of atmosphere.
- true
  - false
- 25) Which is the proper ranking of the warmest to coldest slopes of a hill or sides of a building?
- north > east > west > south
  - south > east > west > north
  - north > west > east > south
  - south > west > east > north
  - west > south > east > north
- 26) When is the earth's axis orientated 23 ½ degrees away from the sun (in the N. Hemisphere)?
- vernal equinox
  - summer solstice
  - winter equinox
  - autumnal equinox
  - winter solstice
- 27) What is the minimum cardinal temperature range for growth of most plants (e.g. the low temperature range at which most plants stop growing)?
- 15 to 29 °F (-9 to -2 °C)
  - 32 to 40 °F (0 to 5 °C)
  - 40 to 50 °F (5 to 6 °C)
  - 65 to 75 °F (18 to 24 °C)
  - 78 to 90 °F (24 to 32 °C)
- 28) When can you grow cool-season plants in Texas?
- during the summer
  - during the fall and winter
  - they can be grown anytime of year
  - you can never grow them in Texas
- 29) We have very hot summers in Texas. What is the best and most recommended way to decrease high soil temperatures under plants during the summer?
- add mulch on top of ground
  - turn on sprinkler in mid-afternoon
  - fan-and-pad cooling system
  - add fine mist or fog
  - paint ground with shading compound or white wash
- 30) If the weatherperson reports the dew point to be 45 °F and the low temperature overnight is forecast to be 28 °F, what type frost would you predict in the morning?
- black frost
  - white frost
  - blue frost
  - advective frost
  - Frostee Freeze



