

PRACTICE EXAM
HORT 201 – 2nd EXAM – from Fall 1999

- 1) Which of the following is the naturally occurring auxin in plants?
 - a) indolebutyric acid
 - b) naphthaleneacetic acid
 - c) indoleacetic acid
 - d) zeatin
 - e) kinetin
- 2) Benzyladenine is a synthetic _____.
 - a) gibberellic acid
 - b) cytokinin
 - c) ethylene
 - d) auxin
 - e) abscisic acid
- 3) Where is the site of gibberellic acid production in the plant?
 - a) shoot tips
 - b) root tips
 - c) embryos
 - d) all are sites of production
 - e) none are sites of production
- 4) _____ is the response to touch.
 - a) geotropism
 - b) touchotropism
 - c) phototropism
 - d) massagotropism
 - e) thigmotropism
- 5) At the cellular level, which hormone is important in triggering cell division?
 - a) gibberellic acid
 - b) cytokinin
 - c) ethylene
 - d) auxin
 - e) abscisic acid
- 6) Who was the first to postulate that plants contained hormones?
 - a) Gregor Mendel
 - b) Charles Darwin
 - c) Liberty Hyde Bailey
 - d) Luther Burbank
 - e) Bill Clinton
- 7) _____ can be sprayed on peach trees in the spring to cause fruit or flowering thinning.
 - a) gibberellic acid
 - b) cytokinin
 - c) ethylene
 - d) auxin
 - e) abscisic acid
- 8) _____ can be used in tissue culture to stimulate adventitious shoot formation.
 - a) gibberellic acid
 - b) cytokinin
 - c) ethylene
 - d) auxin
 - e) abscisic acid
- 9) _____ can be sprayed on greenhouse azaleas to overcome and substitute for cold treatment needed by their buds.
 - a) gibberellic acid
 - b) cytokinin
 - c) ethylene
 - d) auxin
 - e) abscisic acid
- 10) _____ is the curling and contortion of leaves, and is caused by _____.
 - a) abscission / ethylene
 - b) epinasty / ethylene
 - c) abscission / abscisic acid
 - d) epinasty / abscisic acid
 - e) bolting / gibberellic acid

- 11) _____ favors staminate flower formation on monoecious plants, such as cucumbers.
- a) gibberellic acid
 - b) cytokinin
 - c) ethylene
 - d) auxin
 - e) abscisic acid
- 12) One should never store cut flowers and fruit together in the same cooler or refrigerator.
- a) true
 - b) false
- 13) _____ protects plants from drought stress by causing the stomata to close when it starts to get dry.
- a) gibberellic acid
 - b) cytokinin
 - c) ethylene
 - d) auxin
 - e) abscisic acid
- 14) _____ can be used to trigger a bromeliad, such as pineapple, to flower.
- a) gibberellic acid
 - b) cytokinin
 - c) ethylene
 - d) auxin
 - e) abscisic acid
- 15) _____ is the amount of heat (# calories) needed to raise 1 g of a substance by 1 °C.
- a) heat of fusion
 - b) specific heat
 - c) heat of vaporization
 - d) calorie
 - e) British Thermal Unit
- 16) Greenhouses are cooled by fan-and-pad cooling systems. This relies on the very high _____ of water, which is _____.
- a) heat of fusion / 80 cal/g
 - b) heat of vaporization / 80 cal/g
 - c) heat of fusion / 540 cal/g
 - d) heat of vaporization / 540 cal/g
 - e) change of state / 540 cal/g
- 17) The greenhouse effect is caused by trapping _____ within the atmosphere.
- a) visible radiation
 - b) ultraviolet radiation
 - c) infrared radiation
 - d) far red radiation
 - e) microwave radiation
- 18) When water freezes, heat energy is _____ the surroundings.
- a) absorbed from
 - b) released into
- 19) What is the name of the 23 ½° north latitude, which occurs as the upper limit of the Tropical Climatic Zone?
- a) Equator
 - b) Arctic Circle
 - c) Tropic of Capricorn
 - d) Tropic of Cancer
 - e) Tropic of Tan
- 20) At the summer solstice, the earth's axis (at the north pole) is _____ relative to the sun's axis.
- a) tilted 23 ½° away from the sun
 - b) neither tilted toward or away
 - c) tilted 23 ½° towards the sun
- 21) On average, the warmest to coldest sides of a building during the winter are _____.
- a) north > east > west > south
 - b) south > west > east > north
 - c) north > west > east > south
 - d) south > east > west > north

- 32) Orient pear is a 650 hour variety. If you planted Orient pear in Deaf Smith county in the panhandle of north Texas, which is a 1,200 hour zone, it would?
- a) flower at the normal time in spring
 - b) flower too late in the spring, if at all
 - c) flower too early in the spring
 - d) flower in the fall of the year
- 33) Which has the longer chilling requirement?
- a) vegetative buds
 - b) flower buds
- 34) What is the name of the treatment or technique used on seeds of temperate trees to overcome their chilling requirement and cause them to germinate?
- a) vernalization
 - b) stratification
 - c) bolting
 - d) scarification
 - e) chilling
- 35) _____ is flower formation and seed stalk elongation in biennials.
- a) vernalization
 - b) stratification
 - c) bolting
 - d) scarification
 - e) chilling
- 36) What is the wavelength range of visible light (radiation)?
- a) 200-400 nm
 - b) 400-700 nm
 - c) 660 and 730 nm
 - d) 700 to 900 nm
- 37) Which type instrument measures photosynthetically active radiation (PAR)?
- a) radiometer
 - b) psychrometer
 - c) photometer
 - d) tensiometer
 - e) quantum sensor
- 38) When plants bend towards light in response to higher light intensity on one side of the plant, this is called _____.
- a) photoperiod
 - b) vernalization
 - c) phototropism
 - d) phytochromism
 - e) photosynthesis
- 39) If a plant is grown in very low light, it will be long and spindly with pale green to yellowish leaves. This is called _____.
- a) photooxidation
 - b) elongation
 - c) blanching
 - d) etiolation
 - e) stretching
- 40) At a light intensity above a plant's light compensation point, the rate of photosynthesis will be _____ the rate of respiration.
- a) greater than
 - b) less than
 - c) the same as
- 41) At low light intensities, which type plant will have the higher rate of photosynthesis?
- a) shade or acclimatized plant
 - b) sun or non-acclimatized plant
 - c) all plants will have the same rate of photosynthesis

- 42) One method of acclimatization is to give the plant a final period of greatly reduced light intensity before placing it indoors. How long should the plants be left in the acclimatization treatment?
- a) a couple of days
 - b) 1 week
 - c) 4-6 weeks
 - d) 3 months
 - e) 1 year
- 43) If you wanted to shift all the phytochrome in a plant into the active form, you should shine _____ light on the plant.
- a) green
 - b) blue
 - c) red
 - d) far red
 - e) infrared
- 44) In the concept of the atmospheric window, which type of light is not selectively affected upon passing through the earth's atmosphere?
- a) visible light
 - b) ultraviolet light
 - c) infrared light
 - d) far red light
 - e) bud light
- 45) A _____ is a plant that is not affected by photoperiod.
- a) long-day plant
 - b) nyctiperiodic plant
 - c) short-day plant
 - d) day-neutral plant
- 46) Which of the following IS NOT a type of response that some plants have to photoperiod?
- a) flowering
 - b) bulb formation
 - c) fall color development
 - d) stem elongation
 - e) all are responses that plants may have to photoperiod
- 47) Today sunrise was at 7:30 am and will set at 6:51 pm. Therefore, what is the photoperiod that plants will perceive today?
- a) 10 hours 21 minutes
 - b) 10 hours 51 minutes
 - c) 11 hours 21 minutes
 - d) 11 hours 51 minutes
 - e) 12 hours 21 minutes
- 48) What part of the plant measures photoperiod, e.g. is the site of perception of photoperiod?
- a) roots
 - b) stems
 - c) leaves
 - d) flowers
 - e) growing point or apex
- 49) For photoperiodic plants, when do all the critical events occur that trigger flowering?
- a) during the day
 - b) during the night
- 50) Chrysanthemums are short-day plants. If you wanted to make a chrysanthemum flower during the summer, you should _____.
- a) cover with black cloth about 5 pm for the last part of the day and throughout the night
 - b) add artificial light for about the first 6 hours of the night
 - c) add artificial light for about 2 hours in the middle of the night

KEY

- | | | | |
|-----|---|-----|---|
| 1) | c | 26) | b |
| 2) | b | 27) | e |
| 3) | d | 28) | d |
| 4) | e | 29) | a |
| 5) | b | 30) | d |
| 6) | b | 31) | c |
| 7) | d | 32) | c |
| 8) | b | 33) | a |
| 9) | a | 34) | b |
| 10) | b | 35) | c |
| 11) | a | 36) | b |
| 12) | a | 37) | e |
| 13) | e | 38) | c |
| 14) | c | 39) | d |
| 15) | b | 40) | a |
| 16) | d | 41) | a |
| 17) | c | 42) | c |
| 18) | b | 43) | c |
| 19) | d | 44) | a |
| 20) | c | 45) | d |
| 21) | b | 46) | e |
| 22) | c | 47) | e |
| 23) | c | 48) | c |
| 24) | e | 49) | b |
| 25) | d | 50) | a |