

HORT 3020
Pome fruits quiz

(8) 1. Provide the term/name, or indicate which species the following statements correspond to most closely.

Apple European Pear

- a. Inflorescence type (term)
- b. Common clonal rootstock
series (name)
- c. Usually blooms earlier (%)
- d. More economically important (%)
- e. Tolerates heavy, poorly drained soils better (%)
- f. More difficult to train (%)
- g. Chemical thinning is most successful (%)
- h. Controlled atmosphere (CA) storage used more often (%)

(3) 2. List the scientific names

- a. Apple _____
- b. European Pear _____
- c. Asian pear _____

(2) 3. List the top 2 cultivars of apple and European pear in the US.

- | | <u>Apple</u> | <u>European pear</u> |
|---|--------------|----------------------|
| 1 | | |
| 2 | | |

(3) 4. Draw a single apple or pear flower in longitudinal section, labeling all appendages.

(4) 5. Considering all aspects of their culture, which is the best-suited for use as an edible landscape tree for the typical homeowner in Athens, GA - apple or European pear ? [Choose one, and give several points of justification for your choice]

HOR 302

Stone fruits quiz, 25 April, 1996

Name _____

(7) 1. Fill in the following chart, *using the words in parentheses* when given [0.2 pts per block]

Item	Almond	Apricot	European Plum	Japanese Plum	Peach	Sour Cherry	Sweet Cherry
Scientific name (epithet only)							
Pollinizer? (yes, no, some)							
Major US cultivar							
Thinning (none, moderate, heavy)							
Subgenus							

- (1) 2. Rank the following stone fruits in order of bloom date, *from earliest to latest*: Peach, Apricot, Almond, Sweet Cherry
- (1) 3. Other than disease, what precludes almond and apricot production in the southeastern US?
- (1) 4. Which is the most taxonomically diverse and has the greatest selection of rootstocks available of all stone fruits?
Peach Plums Cherries Almond Apricot
- (4) 5. Discuss the peach tree short life syndrome, being sure to address the predisposing factors and the main causes of death.

(10) 1. Give the binomials, families, and fruit types for the following:

<u>Crop</u>	$\frac{1}{2}$ <u>Scientific name</u>	$\frac{1}{4}$ <u>Family</u>	$\frac{1}{2}$ <u>Fruit type</u>
Red raspberry			
European grape			
Concord grape			
Muscadine grape			
Strawberry			
Black raspberry			
Highbush blueberry			
Rabbiteye blueberry			

(1) 2. You are working in an herbarium, and someone brings in a grape shoot for identification. You notice non-forked tendrils and rounded, toothed leaves, but unfortunately there are no fruit. In which subgenus would you place it, *Euvitis* or *Muscadinia*?

(1) 3. What are the two main classes of strawberry cultivars?

(1) 4. List a propagation technique *unique* to brambles.

(1) 5. Southern highbush blueberries have a superior combination of characteristics that allow production of early season, high cash-value fruit in southern Georgia and Northern Florida. Match the parent with the trait it donated to southern highbush cultivars when these hybrids were created.

<u>Trait</u>	<u>Parent</u>
_____ Low chill requirement	A. Northern Highbush blueberry
_____ Short maturation period	B. Rabbiteye and other blueberries native to south Georgia

(1) 6. Someone sets a black raspberry and a blackberry in front of you. They are equal in size and color. How can you tell the difference?

(2) 7. Spur and cane pruning are used for grapes intended for different purposes, or cultivars with particular characteristics. Match the type of pruning to the following statements:

<u>Characteristic</u>	<u>Pruning method</u>
_____ Cultivars with unfruitful basal buds	A. Spur pruned
_____ Cultivars which are very vigorous	B. Cane pruned
_____ Wine production; high internal quality	
_____ Table and raisin grape production; high yield with moderate internal quality	

(2) 8. Name the two main cultural systems used for strawberry production.

1.

2.

(1) 9. What soil fertility considerations are *unique* to blueberries among fruit crops?

(7) 1. List the scientific names and families:

Crop	Scientific name	Family
Pecan		
Persian Walnut		
Pistachio		
Hazelnut		
Macadamia nut		
Cashew		
Chinese Chestnut		

(1) 2. Which of the following are monoecious species

- a. Pecan, walnut, and pistachio
- b. Pecan, walnut, and hazelnut
- c. Pecan, walnut, and macadamia nut
- d. Cashew, pistachio, and chestnut

(1) 3. In which species does the endocarp naturally split at maturity, saving a laborious and difficult post harvest procedure?

(6) 4. Define the following terms related to nut crops:

- A. protandrous
- B. dioecious
- C. involucre
- D. Catkin
- E. Filler tree
- F. Functionally dioecious

(0.5) 5. What is a major botanical factor contributing to differences in yield between walnut (1-3 tons/acre) and pecan (0.5 - 1 ton/acre)?

(0.5) 6. Which species has an unusually long period between pollination and fertilization?

(0.5) 7. Which species grows best in summer wet/winter dry tropical lowlands?

(0.5) 8. Which species has unusually low protein and fat content for a nut?

(0.5) 9. Which species grows best at 3000-5000 ft above sea level in the tropics?

(0.5) 10. List the major cultivars of pecan grown in the eastern and western United States:

eastern US _____ western US _____

(2) 11. List and give a one-sentence description of the two main theories which explain the physiological basis for alternate bearing in nut crops, exclusive of the flower bud abortion phenomenon in pistachio.

1.

2.

(9.5) 1. Fill in the table

Crop	Scientific name	Fruit type	Family
Lemon			
Lime			
Sweet Orange			
Grapefruit			
Tangerine			
Papaya			
Banana			
Mango			
Pineapple			

(2) 2. Compare the characteristics of a 'Valencia' orange grown in Florida vs. California; Place a "+" sign in the appropriate blank to indicate a higher/greater level of expression.

	<u>Florida</u>	<u>California</u>
a. Peel color	_____	_____
b. Peel thickness	_____	_____
c. Sugar/acid ratio	_____	_____
d. Juice content	_____	_____

(1) 3. Which crop is commonly stimulated to flower using ethylene?

(1) 4. Which crop has non-climacteric fruits that can be stored on the tree for months?

(1) 5. Which crop has a pseudostem which looks like a trunk, but is actually the leaf petioles?

(1) 6. Name the two classes of mango cultivars.

(1) 7. Which two genera contain cultivars which exhibit polyembryony?

(1) 8. Which two crops are routinely subjected to post-harvest hot water treatment prior to export to control the spread of fruit fly?

(1) 9. In which crop has biotechnology been extremely important in overcoming a major production problem?

(1) 10. Which crop has the highest agricultural chemical inputs (in terms of lbs of chemical per acre per year) ?

(0.5) 11. Which crop is the largest plant and has the greatest life span of those studied?