KERALA AGRICULTURAL UNIVERSITY

B.Sc.(Hons.) Agriculture – 2010 Admission - I[st] Semester

Final Examination – March/April 2011

Cat. No. : Hort 1101 Max. marks: 80
Title : Fundamentals of Horticulture (1+0) Time : 3 hours

I Fill in the blanks **(20 x 0.5 = 10)**

1. Parthenogenesis is seen in ----------
2. ---------- system of training gives equal dominance for all the branches
3. The common root stock for sapota is ----------
4. Nucellar embryos are common in ----------
5. Growth regulator used for inducing rooting of cuttings is ---------
6. Top working is done for ----------
7. ---------- is a special kind of pruning to expose the tree to full sunlight
8. 15% more trees can be accommodated in ---------- system of planting
9. The condition where pistil mature before stamen is called----------
10. Exposing trees to smoke to induce flowering is ----------
11. Mixed cropping is commonly seen in ---------- plantations
12. Low temperature treatment given to seeds having physiologically dormant embryos is called ----------
13. ---------- acid is used to overcome dormancy of seeds
14. ---------- is the commercial method of propagation in mango
15. During ---------- phase of piant carbohydrate utilization is more than accumulation.
16. Regeneration of plantlets directly from the explant is ----------
17. Summer pruning in grapes is done to enhance---------
18. ---------- and ---------- are the two trees planted as wind breaks of orchards
19. Fruit drop in horticultural crops is controlled by spraying --------
20. Graft incompatibility is commonly seen in ---------

II Write answers in a word or sentence / Define **(10 x 1 = 10)**

1. Define soil conditioners.
2. What are hot beds?
3. Give the classification of horticultural crops based on climatic zones of Kerala?
4. Define parthenocarpy
5. Define dehorning
6. What is root pruning?
7. Write briefly on quincunx system of layout of orchards.
8. Define somaclonal variation
9. What are the objectives of training?
10. Define crop rotation.

III Write short notes / answers etc on any ten **(10 x 2 = 20)**

1. Differentiate training and pruning.
2. Mention the different methods of budding and furnish the advantages and disadvantages.
3. List out the advantages of micropropagation.
4. Write briefly on vegetative – reproductive balance
5. Discuss briefly on double working.
6. What are the factors to be considered in selecting the site for orchards
7. Give the classification of vegetables based on the parts used.
8. Describe the steps involved in the formation of a graft / bud union.
9. Write briefly on propagating structures and plant growth structures in the nursery
10. Give the advantages and disadvantages of seed propagation
11. Give the importance of organic matter in soil on growth and production of horticultural crops.
12. What are the different methods of layering. Cite examples of plants propagated by these methods.

IV Write short essays on Any Four of the following **(4 x 5 = 20)**

1. Give an account of the biotic and abiotic factors affecting the production of horticultural crops.
2. What is graft incompatibility? Elaborate on the factors affecting incompatibility.
3. What is micropropagation? Discuss the principles and potential application of micrpropagation in horticultural crops
4. What is flowering? Discuss various pattern and sex forms in horticultural crops
5. Define dormancy. Mention the types and methods to overcome dormancy of seeds.
6. Explain the importance of post harvest handling of fruits and vegetables in India

V Write essays on Any Two **(2 x 10 = 20)**

1. Discuss the scope and importance of horticultural crops in India and Kerala.
2. Discuss the different planting systems followed in orchard crops.
3. Furnish the classification of growth regulators and their uses in horticultural crop production.