Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **18HO1002** | **Duration :** | **3hrs** |
| **Sub. Name :** | **GROWTH AND DEVELOPMENT OF HORTICULTURAL CROPS** | **Max. Marks :** | **100** |

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| **Q. No.** | **Questions** | | **Course Outcome** | **Marks** |
| **PART – A (20 X 1 = 20 MARKS)** | | | | |
|  | | **Fill in the blanks:** |  |  |
| 1. | | Gibberellins are derivatives of \_\_\_\_\_\_\_\_\_\_\_\_. | CO1 | 1 |
| 2. | | \_\_\_\_\_\_\_\_\_\_\_\_\_ growth regulator is used to produce seedlessness. | CO2 | 1 |
| 3. | | \_\_\_\_\_\_\_\_\_\_\_\_\_ is defined as an irreversible increase in size and it may be evaluated by measurements of mass, length or height, surface area or volume. | CO1 | 1 |
| 4. | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_is formation of fruits without seeds. | CO2 | 1 |
| 5. | | The credit for discovery of kinetin goes to \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | CO1 | 1 |
|  | | **Choose the best answer:** |  |  |
| 6. | | Transport of auxin in plant is predominantly,  (a) Polar (b) Non-polar (c) Lateral (d) None of the above | CO1 | 1 |
| 7. | | Which of the following is not an antigibberellin or growth retardant?  (a) Phosfon D (b) Cycocel (c) Amo-1618 (d) Benzyl adenine | CO2 | 1 |
| 8. | | Richest source of gibberellin in higher plant is \_\_\_\_\_\_\_  (a) Root (b) Stem (c) Leaf (d) Immature seeds | CO1 | 1 |
| 9. | | These plants flower in all photoperiods ranging from 5 hours to 24 hours continuous exposure.  (a) Short day (b) Long day (c) Day netural plants (d) All of these | CO3 | 1 |
| 10. | | \_\_\_\_\_\_\_\_\_\_ is a tool to regulate the tree size and shape to achieve a desired architecture of the canopy.  (a) Pruning (b) Training (c) Pruning and Training (d) All of these | CO3 | 1 |
|  | | **True or False:** |  |  |
| 11. | | Lemon is an example for Non-Climatric fruit. | CO3 | 1 |
| 12. | | Short day plants require more than the critical duration of light to flower  (usually 14 - 16 hours). | CO3 | 1 |
| 13. | | NAA is very effective in controlling the fruit drop. | CO2 | 1 |
| 14. | | If the growth rate is plotted against time, a slanting S shaped curve is obtained which is called as sigmoid. | CO1 | 1 |
| 15. | | Abscisic acid (ABA) is not involved in,Senscene. | CO2 | 1 |
|  | | **Match the following:** |  |  |
| 16. | | Abscisic acid (ABA) --- Fruit ripening | CO1 | 1 |
| 17. | | Malic Hydroxide --- 2,4-D | CO2 | 1 |
| 18. | | Ethylene --- Mango | CO3 | 1 |
| 19. | | Weed control --- Growth Retardant | CO2 | 1 |
| 20. | | Climatric fruit --- Cell elongation | CO1 | 1 |

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| **PART – B (10 X 5 = 50 MARKS)**  (Answer any 10 from the following) | | | |
| 21. | List the roles of ABA. | CO1 | 5 |
| 22. | What are the internal and external factors of Growth? | CO1 | 5 |
| 23. | Write down the importance of photoperiodism. | CO2 | 5 |
| 24. | Discuss the physiological effects of Gibberellins. | CO3 | 5 |
| 25. | Discuss the canopy management. | CO3 | 5 |
| 26. | Discuss the Long day, short day plant and day Netural plants. | CO3 | 5 |
| 27. | Define Fruit drop. Discuss the three stages of Fruit drop. | CO2 | 5 |
| 28. | Write a note on Vernalisation and application in horticultural crops. | CO2 | 5 |
| 29. | Discuss on Apical Dominace. | CO1 | 5 |
| 30. | Discuss on Auxin and their role in Horticultural crops. | CO2 | 5 |
| 31. | Explain the leaf area index. | CO1 | 5 |
| 32. | List out the growth regulators and explain any one growth regulator. | CO1 | 5 |

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| **PART – C (2 X 15 = 30 MARKS)**  (Answer any 2 from the following) | | | | |
| 33. | a. | Discuss the different types of Dormancy. | CO2 | 15 |
| b. | Explain the source and sink relationship. | CO2 |
|  |  |  |  |  |
| 34. | a. | Discuss Physiology of Fruit Ripening-climacteric and non-climacteric fruits. | CO3 | 15 |
| b. | Explain the Physiological basis of training and pruning. | CO3 |
|  |  |  |  |  |
| 35. | a. | Write note on physiology of seed development. | CO3 | 15 |
| b. | Explain the factors causing dormancy of seeds and advantages of dormancy. | CO1 |