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

****

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

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **18HO2015** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BREEDING OF FRUITS, SPICES AND PLANTATION CROPS** | **Max. Marks :** | **100** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Q. No.** | **Questions** | **Course Outcome** | **Marks** |
| **PART – A (20X1 = 20 MARKS)** | | | |
| 1. | Mention any two Polyembryonic variety in mango. | CO2 | 1 |
| 2. | Write the Parentage of Arka Anmol in Mango. | CO2 | 1 |
| 3. | Write the Tetraplod Starchy variety in Banana. | CO1 | 1 |
| 4. | Write the Bud sport of Anab-e-shahi. | CO1 | 1 |
| 5. | Write the Papaya variety released through selection for pappin extraction. | CO2 | 1 |
| 6. | Write the Parentage of CO-4 papaya. | CO1 | 1 |
| 7. | Write the two commercial varieties in plum. | CO1 | 1 |
| 8. | Write the off-season varieties of mango. | CO1 | 1 |
| 9. | Mention any two commercial redflushed variety of Guava. | CO2 | 1 |
| 10. | Write the commercial variety of Pomegranate. | CO1 | 1 |
| 11. | Write the Genomic constitution of dwarf Cavendish. | CO2 | 1 |
| 12. | Write the Parentage of Citrange. | CO3 | 1 |
| 13. | Mention the Parentage of Medica grape variety. | CO2 | 1 |
| 14. | Write the Parentage of Kohir Safeda of Guava. | CO1 | 1 |
| 15. | Mention the Species resistant to frost in Papaya. | CO3 | 1 |
| 16. | Mention the Parentage of Sabour priya of Litchi. | CO1 | 1 |
| 17. | Mention the Parentage of Lal ambri of apple. | CO1 | 1 |
| 18. | Write the National Research Institute working in Coconut. | CO3 | 1 |
| 19. | Write the Parentage of VTLAH-1 arecanut. | CO1 | 1 |
| 20. | Mention the Somatic chromosome number of Aonla. | CO1 | 1 |

|  |  |  |  |
| --- | --- | --- | --- |
| **PART – B (10 X 5 = 50 MARKS)**  **(Answer any 10 from the following)** | | | |
| 21. | Write the different methods of breeding adopted in mango. | CO2 | 5 |
| 22. | Write the varieties of mango developed through hybridization. | CO2 | 5 |
| 23. | Explain the methods to develop hybrids/varieties in banana. | CO3 | 5 |
| 24. | Explain the crossing technique in banana. | CO3 | 5 |
| 25. | Write the different varieties and hybrids in custard apple. | CO1 | 5 |
| 26. | Write down the breeding methods of papaya and the varieties released. | CO2 | 5 |
| 27. | Explain bud mutation and its uses in crop improvement. | CO3 | 5 |
| 28. | Write down the crossing technique in coconut. | CO1 | 5 |
| 29. | Write the breeding methods and varieties released in apple through hybridization. | CO1 | 5 |
| 30. | Write the commercial varieties in arecanut and its important characters. | CO2 | 5 |
| 31. | Explain the breeding methods in apricot and achievements made in development of varieties. | CO3 | 5 |
| 32. | Explain the breeding starategies adopted in guava. | CO3 | 5 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PART – C (2 X 15 = 30 MARKS)**  **(Answer any 2 from the following)** | | | | |
| 33. | a. | Define clonal selection. Explain the importance and achievements made in major fruit crops through clonal selection. | CO1 | 15 |
| b. | Explain the different In-Vitro breeding tools and its role in major fruits and spices crops. | CO1 |
|  |  |  |  |  |
| 34. | a. | Explain in detail the crossing techniques, commercial varieties developed through different breeding methods in grapes. | CO2 | 15 |
| b. | Define mutation. Explain the different types of mutation and achievements made through mutation in different fruit and spices crops. | CO3 |
|  |  |  |  |  |
| 35. | a. | Explain the different breeding methods and achievements made in any five minor fruit crops. | CO1 | 15 |
| b. | Explain the different breeding methods and achievements made in sapota and jamun. | CO3 |