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

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

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| **Code :** | **18HO2003** | **Duration :** | **3hrs** |
| **Sub. Name :** | **PRECISION FARMING AND PROTECTED CULTIVATION** | **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. | Precise application of agricultural inputs due to variation is called as \_\_\_\_\_\_\_\_\_. | | CO1 | 1 |
| 2. | Green house effect is due to atmospheric gases such as \_\_\_\_\_\_\_\_\_\_. | | CO1 | 1 |
| 3. | Tools used for precision Agriculture are \_\_\_\_\_\_\_\_\_\_. | | CO2 | 1 |
| 4. | GIS means \_\_\_\_\_\_\_\_\_\_. | | CO1 | 1 |
| 5. | Component of all VR applicators are \_\_\_\_\_\_\_\_\_\_. | | CO3 | 1 |
|  | **Choose the best answer:** | |  |  |
| 6. | Crops that can be grown under green houses are | | CO3 | 1 |
|  | 1. Cucumber and ashgourd | 1. Cucumber and tomato |  |  |
|  | 1. Tomato and pumkin | 1. All the above |  |  |
| 7. | Plastic mulching is done for | | CO2 | 1 |
|  | 1. Weed control | 1. Moisture consevation |  |  |
|  | 1. Maintain the soil temperature | 1. All the above |  |  |
| 8. | Pollination in protection cultivation is done by | | CO2 | 1 |
|  | 1. Bee hives | 1. Wind pollination |  |  |
|  | 1. Hand pollination | 1. None of the above |  |  |
| 9. | Pendimethalin is a | | CO1 | 1 |
|  | 1. Insecticide | 1. Herbicide |  |  |
|  | 1. Fungicide | 1. Growth regulator |  |  |
| 10. | Climatic factor that influence the crop growth | | CO1 | 1 |
|  | 1. Temperature | 1. Rainfall |  |  |
|  | 1. Relative humidity | 1. All the above |  |  |
|  | **State Ture or False:** | |  | 1 |
| 11. | Yield maps are important data source for controlling the fluctuation of soil parameters. | | CO1 |  |
| 12. | Relative humidity will be more inside the green house than in the surrounding environment. | | CO1 | 1 |
| 13. | Variable seeding rate planters are used in conventional agriculture. | | CO2 | 1 |
| 14. | Massey Fergussion was the first company to produce commercial yield mapping combine. | | CO1 | 1 |
| 15. | Poly vinyl chloride ultraviolet (UV) stabilized film has ten years of life span. | | CO3 | 1 |
|  | **Match the following :** | |  |  |
| 16. | Variable rate applicator – Pest management | | CO1 | 1 |
| 17. | Vermiculite – Precision farming | | CO3 | 1 |
| 18. | Soil solaraisation – Line sowing | | CO1 | 1 |
| 19. | Trichogramma sp – Growing media | | CO2 | 1 |
| 20. | Modern seed drill – Disease management | | CO2 | 1 |

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| **PART – B (10 X 5 = 50 MARKS)**  **(Answer any 10 from the following)** | | | |
| 21. | Define the concept of precision farming. | CO1 | 5 |
| 22. | What are the advantages of Greenhouses? | CO2 | 5 |
| 23. | Define soil pasteurization and soil solarisation. | CO1 | 5 |
| 24. | List out the abiotic factors that influence the growth of plants in protected cultivation. | CO1 | 5 |
| 25. | Define integrated weed management. How weeds are managed in protected cultivation? | CO3 | 5 |
| 26. | What are the different irrigation systems used in green houses? | CO2 | 5 |
| 27. | List out the yield mapping components. | CO1 | 5 |
| 28. | Define hydrophonics. | CO3 | 5 |
| 29. | What are the constraints in cultivation of crops under green house condition? | CO2 | 5 |
| 30. | List out the charateristics of a good growing media. | CO3 | 5 |
| 31. | List out the soil borne fungal diseases that affect the tomato and brinjal cultivation. | CO1 | 5 |
| 32. | What are the traditional and low cost green houses available for flower cultivation? | CO3 | 5 |

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| **PART – C (2 X 15 = 30 MARKS)**  **(Answer any 2 from the following)** | | | | |
| 33. | a. | List out the opportunities of Precision farming in Indian Agriculture. | CO2 | 15 |
| b. | Explore the possibilities of mechanisation in presision farming. | CO2 |
|  |  |  |  |  |
| 34. | a. | Classify the different types of greenhouses with suitable examples. | CO3 | 15 |
| b. | What are the criteria to be considered while constructing a greenhouse for cooling and heating purposes? | CO3 |
|  |  |  |  |  |
| 35. | a. | Briefly discuss site specific nutrient application and its role in precision farming. | CO1 | 15 |
| b. | Do an economic analysis for establishment of a green house in an area of 1000 square metre for cucumber cultivation. | CO2 |