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

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

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| **Code :** | **18HO2005** | **Duration :** | **3hrs** |
| **Sub. Name :** | **SOIL FERTILITY AND NUTRIENT MANAGEMENT** | **Max. Marks :** | **100** |

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| **Q. No.** | **Questions** | **Course Outcome** | **Marks** |
| **PART - A (20X1=20 MARKS)** | | | |
| 1. | Define Soil fertility. | CO1 | 1 |
| 2. | Define Soil productivity. | CO1 | 1 |
| 3. | List the major and minor nutrients. | CO1 | 1 |
| 4. | Reclamation for acid soil. | CO2 | 1 |
| 5. | What is Humus? | CO2 | 1 |
| 6. | Define Hidden hunger. | CO1 | 1 |
| 7. | What are the toxicity symptoms of Nitrogen? | CO1 | 1 |
| 8. | Define STCR. | CO2 | 1 |
| 9. | Define C: N ratio. | CO2 | 1 |
| 10. | What is Biofertilizer? Give two examples. | CO3 | 1 |
| 11. | Define Nutrient Use Efficiency. | CO3 | 1 |
| 12. | Classify nitrogenous Fertilizer. | CO3 | 1 |
| 13. | INM – Explain. | CO3 | 1 |
| 14. | State Criteria of essentiality. | CO1 | 1 |
| 15. | State Liebig’s Law of Minimum. | CO1 | 1 |
| 16. | What is called Luxury Consumption? | CO1 | 1 |
| 17. | What are the Deficiency symptoms of Boron. | CO1 | 1 |
| 18. | What are beneficial elements? | CO1 | 1 |
| 19. | Define Mineralisation and immobilisation. | CO2 | 1 |
| 20. | What are Organic and inorganic forms of Nitrogen? | CO2 | 1 |

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| **PART – B (10 X 5 = 50 MARKS)**  **(Answer any 10 from the following)** | | | |
| 21. | What are the factors affecting soil fertility? | CO1 | 5 |
| 22. | Explain the functions and deficiency symptoms of Major Nutrients. | CO1 | 5 |
| 23. | Define salt affected soil. Mention its characteristics and management. | CO2 | 5 |
| 24. | Importance of C:N ratio and pH in Plant nutrition. | CO2 | 5 |
| 25. | Explain the evaluation methods of soil fertility. | CO2 | 5 |
| 26. | Agronomic management to improve the Fertilizer use efficiency-explain briefly. | CO3 | 5 |
| 27. | Describe Fate of Nitrogenous and Potassic fertilizer in soil. | CO2 | 5 |
| 28. | Fertilizer control order – Explain. | CO2 | 5 |
| 29. | Describe the methods of fertilizer application. | CO3 | 5 |
| 30. | Explain the manufacturing process of Urea. | CO2 | 5 |
| 31. | Write the effect of Potential toxic elements in soil productivity. | CO2 | 5 |
| 32. | Write the classifications of Bio fertilizer and explain in brief. | CO3 | 5 |

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| **PART – C (2 X 15 = 30 MARKS)**  **(Answer any 2 from the following)** | | | | |
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| 33. | a. | Elucidate Transformation Dynamics of Phosphorus and potassium in soil. | CO2 | 15 |
| b. | Explain in detail the characters of saline soil and its management. | CO2 |
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| 34. | a. | What are the plant nutrient toxicity symptoms of Boron and Manganese? Give remedial measures. | CO1 | 15 |
| b. | Define manure. Explain the bulky organic manures. | CO3 |
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| 35. | a. | Explain the deficiency symptoms of micronutrients and its management. | CO1 | 15 |
| b. | Explain in detail the Integrated Plant Nutrient Management. | CO3 |