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



**Reappearance Examination – Nov / Dec – 2019**

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| **Code :** | **17AG1011** | **Duration :** | **3hrs** |
| **Sub. Name :** | **INTRODUCTION TO SOIL SCIENCE** | **Max. Marks :** | **100** |

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| **Q. No.** | **Questions** | **Course Outcome** | **Marks** |
|  | **PART – A (20 X 1 = 20 MARKS)** | | |
| 1. | Who is the father of soil science? | CO1 | 1 |
| 2. | What you mean by pedology? | CO1 | 1 |
| 3. | The composition of soil air and water in soil is \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_. | CO2 | 1 |
| 4. | Define weathering. | CO1 | 1 |
| 5. | Active soil forming factors are \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_. | CO2 | 1 |
| 6. | Differentiate between bulk density and particle density. | CO2 | 1 |
| 7. | Define the term soil consistency. | CO2 | 1 |
| 8. | Give one example for Metamorphic rocks. | CO2 | 1 |
| 9. | What are clods? | CO1 | 1 |
| 10. | Draw the structure of silica tetrahedran. | CO2 | 1 |
| 11. | Define permanent wilting point. | CO1 | 1 |
| 12. | What are the two types of pore spaces? | CO2 | 1 |
| 13. | Name the colour chart to determine soil colour. | CO1 | 1 |
| 14. | How many textural classes are in soil? | CO2 | 1 |
| 15. | Define soil structure. | CO2 | 1 |
| 16. | The dominant spectral colour is named as \_\_\_\_\_\_\_\_\_\_. | CO2 | 1 |
| 17. | Expand CEC and AEC. | CO3 | 1 |
| 18. | What is albedo? | CO2 | 1 |
| 19. | Define soil texture. | CO3 | 1 |
| 20. | Give an example for sedimentary rocks. | CO2 | 1 |

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| **PART – B (10 X 5 = 50 MARKS)**  **(Answer any 10 from the following)** | | | |
| 21. | Discuss on chemical weathering. | CO2 | 5 |
| 22. | Explain the factors of soil formation. | CO2 | 5 |
| 23. | Give a brief note on general properties of colloids. | CO2 | 5 |
| 24. | Explain the process of decomposition of organic matter in soil. | CO3 | 5 |
| 25. | List out the classification of layer silicate clays. | CO2 | 5 |
| 26. | Explain soil colour and soil compaction. | CO2 | 5 |
| 27. | Write down the importance of soil fauna. | CO3 | 5 |
| 28. | Write in detail on soil humus. | CO3 | 5 |
| 29. | Explain the soil Mycorrhizae in a brief manner. | CO3 | 5 |
| 30. | What are sedimentary rocks? Explain their classification with suitable examples. | CO2 | 5 |
| 31. | What is ion exchange? Explain the different types of soil ion exchange mechanism in a brief manner. | CO2 | 5 |
| 32. | Elaborate the C cycle with neat diagram. | CO3 | 5 |

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| **PART – C (2 X 15 = 30 MARKS)**  **(Answer any 2 from the following)** | | | | |
| 33. | a. | Explain about the interior and exterior parts of planet Earth. | CO1 | 8 |
| b. | Elaborate the classification of rocks. | CO1 | 7 |
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| 34. | a. | Explain the different textural classification in a detailed manner. | CO2 | 7 |
| b. | Give a detailed note on soil structure classification along with suitable diagrams. | CO2 | 8 |
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| 35. | a. | Write down the importance and implications of C:N ratio in soil. | CO3 | 8 |
| b. | Discuss on soil macrofauna in a detailed manner. | CO3 | 7 |