

**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, ODISHA, GUNUPUR
(GIET UNIVERSITY)**



B. Sc. (Ag.) (First Semester - Regular) Examinations, February - 2025

AC-111 – Fundamentals of Soil Science

Time: 2 hrs

Maximum: 40 Marks

Answer ALL questions

(The figures in the right hand margin indicate marks)

PART – A

(2 x 5 = 10 Marks)

Q.1. Answer **ALL** questions

- Provide the definition of soil on pedological and edaphological point of view.
- Draw the structure of inosilicate and provide one example.
- Define Permanent Wilting Point.
- Define Active and Passive factors of soil formation with suitable examples.
- Write down the characteristics of sand, silt and clay.

PART – B

(6 x 5=30 Marks)

Answer **ANY SIX** questions

Marks

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|---|---|
| 2. Define Soil with various point of view. Explain the different branches of soil science. | 5 |
| 3. Define mineral. Classify mineral on the basis of composition and arrangement of silicates. | 5 |
| 4. Explain the methods for estimation of soil moisture. Briefly explain with suitable diagram if necessary. | 5 |
| 5. Provide a brief description of all the orders of Soil taxonomy. | 5 |
| 6. Explain the various factors of soil formation in details. | 5 |
| 7. Describe the various physical agents for weathering. | 5 |
| 8. Differentiate between the following, | 5 |
| a) A Horizon Vs. B-Horizon | |
| b) Red Soil Vs. Black Soil | |
| c) Soil Texture Vs. Soil Structure | |
| 9. Define Particle density. Calculate the porosity of a soil sample that has a bulk density of 1.35 g/cm ³ . Assume the particle density is 2.65 g/cm ³ . | 5 |

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