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GIET UNIVERSITY, GUNUPUR – 765022
 B. Tech (Third Semester - Regular) Examinations, December – 2022
21BAEPC23002 – Principles of Soil Science
 (AGE)

Time: 3 hrs

Maximum: 70 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

	CO #	Blooms Level
a. What is Soil ?	CO1	1
b. Write short notes on Igneous rock ?	CO1	1
c. What is Hydrolysis ?	CO1	1
d. What is Porosity ?	CO1	1
e. What is Capillary water ?	CO2	1

PART – B**(15 x 4 = 60 Marks)**Answer ALL the questions

	Marks	CO #	Blooms Level
2. a. What is Soil science? Write about the branches and concept of soil science.	8	CO1	1
b. What is Weathering? Explain about Chemical weathering process.	7	CO1	2
(OR)			
c. What is Soil formation? Write about specific pedogenic process.	8	CO1	1
d. Write about the reclamation method of Soil alkalinity.	7	CO3	1
3.a. Write down the function of Primary macronutrients in plant.	8	CO3	1
b. What is Criteria of Essentiality? Write about the role of Boron & Molybdenum in plant growth.	7	CO3	1
(OR)			
c. What is Soil structure & write about Types of Soil structure.	8	CO1	1
d. What is Soil plasticity? Write about its classification.	7	CO2	1
4.a. Write about the Source & Process of Acid soil formation ?	8	CO3	1
b. Write down the Biological classification of Soil water.	7	CO2	1
(OR)			
c. Write about Soil water potential?	8	CO2	1
d. How Soil salinity affect the quality of irrigation water ?	7	CO3	1
5.a. What is Soil consistency? Briefly explain about it.	8	CO2	2
b. Write the role of Calcium & Magnesium in plant growth.	7	CO3	1
(OR)			
c. What is Fertilizer? Write about the classification of fertilizer.	8	CO3	1
d. What is Residual sodium carbonate? An irrigation water contains Carbonate(CO_3^{2-}), bicarbonate(HCO_3^-), Calcium(Ca^{2+}) & Magnesium(Mg^{2+}) ions 2,1.5,3.5,2 me/l respectively. Calculate the residual sodium carbonate (RSC) content of the irrigation water and give your comments?	7	CO3	3

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