

Reg. No:

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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B. Tech II Year I Semester Supplementary Examinations November-2022
PRINCIPLES OF AGRONOMY & SOIL SCIENCE

(Agricultural Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

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|-----|---------------------------------------------------------|----|----|
| 1 a | Compare Sustainable Agriculture and Modern Agriculture. | L4 | 6M |
| b | Define Agriculture, Agronomy and Tillage. | L1 | 6M |

OR

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|-----|------------------------------------------------------------------------|----|----|
| 2 a | Discuss the effect of Climatic Factors on Crop Growth and Development. | L6 | 8M |
| b | What is scope of Agronomy? | L1 | 4M |

UNIT-II

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|-----|----------------------------------------------------------------------------|----|----|
| 3 a | Name the critical stages of Irrigation for different crops in tabular form | L1 | 8M |
| b | Define Intercropping and mention its objectives | L2 | 4M |

OR

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|-----|--------------------------------------------------------------------------------------------|----|----|
| 4 a | Define Mixed Cropping and what are the Steps involved in Estimation of Evapotranspiration. | L1 | 4M |
| b | Describe the soil properties influencing root development and effective root zone depth. | L2 | 8M |

UNIT-III

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|-----|--------------------------------------------------------------------------------------|----|----|
| 5 a | Mention and explain the Factors affecting the Bulk Density. | L1 | 4M |
| b | Enlist the Weathering Process? Describe Physical and biological weathering processes | L3 | 8M |

OR

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|-----|---------------------------------------------------------------------|----|----|
| 6 a | How the Soil structure shows influence on soil physical properties. | L1 | 4M |
| b | Explain the Early System and recent system of soil classification. | L4 | 8M |

UNIT-IV

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|-----|-------------------------------------------------------------------------------------------|----|----|
| 7 a | Justify why Gypsum is not considered as a Liming material and explain the types of Slags. | L5 | 6M |
| b | Define Laterisation and Podzolisation with explain with their respective conditions. | L1 | 6M |

OR

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|-----|----------------------------------------------|----|----|
| 8 a | Describe Carbon:Nitrogen Ratio in detail. | L2 | 6M |
| b | What are the factors affecting Ion Exchange. | L1 | 6M |

UNIT-V

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|-----|-----------------------------------------------------------------------------|----|----|
| 9 a | Explain Criteria of Essentiality. | L2 | 4M |
| b | Mention the functions and deficiency symptoms of Potassium and Phosphorous. | L3 | 8M |

OR

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|------|-------------------------------------------------------------------------------|----|----|
| 10 a | Identify the deficiency symptoms of nutrients based on | L4 | 7M |
| | i) Region of Occurrence | | |
| | ii) Presence or absence of dead spots | | |
| | iii) Chlorosis of entire leaf or intervienal chlorosis | | |
| b | List down the Fertilizers containing Phosphorous and explain any six of them. | L4 | 5M |

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