

I B. Tech II Semester Supplementary Examinations, March -2022
PRINCIPLES OF SOIL SCIENCE & AGRONOMY
(Agri E)

Time: 3 hours

Max. Marks: 75

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

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**UNIT-I**

1. a) Define soil profile. Describe the soil profile and its development. (8M)  
b) What are the different steps involved in soil formation process? (7M)

Or

2. a) Briefly explain about soil formation process. (8M)  
b) What are problem soils? How to reclaim acid soils? (7M)

**UNIT-II**

3. a) Define infiltration. Explain different factors influencing infiltration. (8M)  
b) Define evaporation. Write the different factors influencing evaporation and ways to minimize it. (7M)

Or

4. a) How bulk density, porosity, moisture content, soil texture and structure effects on thermal properties of soil. (8M)  
b) What are the properties of soil colloids? Write about origin of charge on colloids. (7M)

**UNIT-III**

5. a) Write different steps evolved in solubilization of phosphorus and sulphur in soils. (8M)  
b) Role of CN ratio in crop production. (7M)

Or

6. a) What is meant by ion exchange and explain their significance? (8M)  
b) What are the factors influencing the ion exchange? (7M)

**UNIT-IV**

7. a) Write the practical utility of Agricultural meteorology. (8M)  
b) Describe Agro Climatic Zones of AP. (7M)

Or

8. a) Discuss about different methods of fertilizer application to agricultural crops. (8M)  
b) Write the history of agricultural development in ancient India. (7M)

**UNIT-V**

9. a) Define Agro climatology. Write the composition and structure of atmosphere with neat graph. (8M)  
b) Explain briefly the role of weather on crop production. (7M)

Or

10. a) Enlist different kinds of Soil erosion. Describe any two erosion preventing measures in detail. (8M)  
b) Write the objectives of watershed management. (7M)