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Course Code: 241AE002



**ADITYA UNIVERSITY**

B.Tech – I Semester End Examinations Regular – Dec 2024

**CROP PRODUCTION AND PROTECTION TECHNOLOGIES**

**(Agricultural Engineering)**

**Time: 3 hours**

**Max. Marks: 50**

**Answer ONE question from each unit**

**All Questions Carry Equal Marks**

**All parts of the questions must be answered at one place only**

**UNIT-I**

- 1 a Define tillth and tillage? Write down the principles and characteristics of tillage? L1 CO1 [5M]  
b Explain the effect of different weather parameters on crop growth and development? L2 CO1 [5M]

**(OR)**

- 2 a Name the principal Kharif crop of your region. Give the normal requirement of seed per hectare and the average yield per hectare of the crop. L2 CO1 [5M]  
b Differentiate natural farming, organic farming and sustainable agriculture? What is the importance of organic farming in modern agriculture? L2 CO1 [5M]

**UNIT-II**

- 3 a What is cropping system? What are the types of cropping system? What are the objectives of cropping system? L1 CO2 [5M]  
b Describe any five water quality parameters with their suitability for irrigation as per standards? L2 CO2 [5M]

**(OR)**

- 4 a What is weed and write the methods for controlling weeds? L2 CO2 [4M]  
b Explain soil-water-plant relationship? L2 CO2 [6M]

**UNIT-III**

- 5 a What is organic matter? Explain functions of soil organic matter? L2 CO3 [4M]  
b Classify soils and write its composition? L2 CO3 [6M]

**(OR)**

- 6 a Describe soil forming processes? L2 CO3 [5M]  
b List out important soil physical and their importance? L2 CO3 [5M]

**UNIT-IV**

- 7 a Classify and list out all plant nutrients? Explain different nutrients with their role in plant growth. L2 CO4 [5M]  
b Explain the symptoms due to deficiency of different micro nutrients? L2 CO4 [5M]

**(P.T.O)**

(OR)

- 8 a Define sodium absorption ratio and residual sodium carbon. Classify saline, alkali and acidic soils? L2 CO4 [5M]  
b Describe procedure for reclamation of saline and alkali soils? L2 CO4 [5M]

**UNIT-V**

- 9 a Describe procedure for treatment of seeds in vegetable crops? L2 CO5 [5M]  
b Explain different sowing methods along with Pros and Cons? L2 CO5 [5M]

(OR)

- 10 a Differentiate Pruning and training. Explain methods of Pruning and training? L2 CO5 [5M]  
b List out major pests and diseases of Indian commercial crops? L1 CO5 [5M]

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