



ADITYA UNIVERSITY

B.Tech – I Semester End Examinations Supplementary – APR 2025

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 Explain the effect of temperature and wind on crop growth and development. L2 CO1 [5M]
b Define tillage. Explain the objectives and effects of tillage on soil properties. L2 CO1 [5M]

(OR)

- 2 a Explain the methods and time of application of manure and fertilizers? L2 CO1 [6M]
b Describe the various principles involved in organic farming and its importance. L2 CO1 [4M]

UNIT-II

- 3 a Explain the influence of weeds on crop production and their management. L2 CO2 [5M]
b Illustrate the following terms i) Cropping scheme ii) Intercropping iii) Mixed cropping iv) Relay cropping v) Crop rotation L2 CO2 [5M]

(OR)

- 4 a What is critical growth stage and list out the critical growth stages of any four field crops? L2 CO2 [5M]
b Explain the crop coefficient along with a suitable diagram. L2 CO2 [5M]

UNIT-III

- 5 a Classify soils and write its composition? L2 CO3 [5M]
b Enlist the physical properties of soil? Explain various methods involved in determination of soil texture. L2 CO3 [5M]

(OR)

- 6 a Write in detail about soil forming processes? L2 CO3 [7M]
b Explain in brief about effect of organic matter on soil fertility. L2 CO3 [3M]

UNIT-IV

- 7 a Write about functions and deficiency symptoms of phosphorus and sulphur in plants? L2 CO4 [5M]
b Define inorganic fertilizer. Give the classification of inorganic fertilizers along with examples L2 CO4 [5M]

(OR)

- 8 a Explain the characteristics and reclamation of sodic soils. L2 CO4 [5M]
b What are primary, secondary and micronutrient elements? L2 CO4 [5M]

(P.T.O)

UNIT-V

- 9 a What are the major pests and diseases of horticultural crops and how to manage them L2 CO5 [5M]
b Enlist the various methods of macropropagation techniques in vegetable crops and explain any two. L2 CO5 [5M]

(OR)

- 10 a Explain in brief about the various steps involved in establishment of an orchard. L2 CO5 [6M]
b Write about the different methods of training adopted in fruit crops. L2 CO5 [4M]
