



ADITYA UNIVERSITY

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

AGRICULTURAL INFORMATICS (Agricultural Engineering)

Time: 3 hours

Max. Marks: 100

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 List the major components of a computer and explain their role in processing agricultural data. L2 CO1 [10M]
b Demonstrate how to create charts and perform basic statistical analysis in MS-Excel using crop yield data. L3 CO1 [10M]

(OR)

- 2 a Summarize types of operating systems and illustrate their applications in farm automation systems. L2 CO1 [10M]
b Using MS-PowerPoint, prepare a template for scientific presentations related to soil analysis. L3 CO1 [10M]

UNIT-II

- 3 a Explain mathematical expressions used in DBMS with examples from agriculture. L2 CO2 [10M]
b In MS-ACCESS, construct a farmer-wise crop inventory table and generate a report summarizing total production. L3 CO2 [10M]

(OR)

- 4 a Differentiate between data, information, and knowledge in the context of agri-information systems. L2 CO2 [10M]
b Analyze the impact of DBMS adoption in precision farming applications. L4 CO2 [10M]

UNIT-III

- 5 a Illustrate the concept of WWW with its components and agricultural applications. L2 CO3 [10M]
b Compare high-level and low-level programming languages with suitable examples. L4 CO3 [10M]

(OR)

- 6 a Describe the role of programming languages in computing agricultural parameters. L2 CO3 [10M]
b Write a simple HTML code snippet to display crop details in tabular form. L3 CO3 [10M]

UNIT-IV

- 7 a Explain automated systems in agriculture and outline their role in agri-input management. L2 CO4 [10M]
b Analyze how ICT helps farmers improve market access and post-harvest management. L4 CO4 [10M]

(P.T.O)

(OR)

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|---|---|--|----|-----|-------|
| 8 | a | Discuss decision support systems used in agriculture with examples. | L2 | CO4 | [10M] |
| | b | Evaluate DSSAT as a crop simulation model and justify its use in climate-based planning. | L5 | CO4 | [10M] |

UNIT-V

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|---|---|---|----|-----|-------|
| 9 | a | Explain the components of geospatial technology and describe their applications in crop planning. | L2 | CO5 | [10M] |
| | b | Apply geospatial tools to design a layout for soil information mapping. | L3 | CO5 | [10M] |

(OR)

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|----|---|--|----|-----|-------|
| 10 | a | Analyze the structure of an expert system in agriculture and its benefits for farmers. | L4 | CO5 | [10M] |
| | b | Propose a geospatial-based solution for monitoring pest outbreaks in a farming region. | L6 | CO5 | [10M] |
