

Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025

Seventh Semester

Information Technology

AI3021- IT in Agricultural Systems

(Common to Artificial Intelligence and Data Science, Biomedical Engineering,
Computer Science and Engineering & Electronics and Communication Engineering)

Regulations - 2021

Duration : 3 Hrs

Maximum : 100 Marks

*PART - A (ANSWER ALL QUESTIONS) (Marks 10*2=20)*

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	Define Yield mapping system.	L1	1	2
2.	Remote sensing data is helpful in identifying the stage of the crop- Justify.	L2	1	2
3.	What are the types of artificial lights?	L1	2	2
4.	Define artificial light system of greenhouse.	L1	2	2
5.	Give the simulation of a reservoir related to irrigation release.	L2	3	2
6.	Mention the two factors that affect the reliability of agricultural systems.	L1	3	2
7.	Define Predicting world's climate systems.	L1	4	2
8.	Write a note on weather predications model.	L2	4	2
9.	Difference between E-business and E-commerce.	L2	5	2
10.	Write a note on Information Society in social perspective of rural.	L2	5	2

*PART - B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)*

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Explain the concept of precision agriculture and its significance in modern agricultural practices.	L2	1	8
	ii Explain about GIS information system for precision farming.	L2	1	8
	Or			
	b Describe the role of ground-based sensors and remote sensing in precision farming. Provide examples of their applications.	L2	1	16
12.	a Describe the working principles and applications of artificial light systems in greenhouses. How do they contribute to crop growth management?	L2	2	16
	Or			
	b i Explain the role of CO ₂ consumption models in greenhouse environments and their importance for optimizing plant production.	L2	2	8
	ii Briefly explain the application of expert systems in horticulture for decision-making.	L2	2	8

13.	a	Explain the significance of linear programming and its application in resource optimization in agricultural systems.	L2	3	16
		Or			
	b i	Explain Artificial intelligent system and decision support systems.	L2	3	8
	ii	What are the major steps involved in project scheduling in agriculture? Provide a real-world example of a farm management project.	L2	3	8
14.	a i	Narrate the Importance of climate variability and seasonal forecasting.	L2	4	8
	ii	Describe the different types of Global Climatic Models (GCMs).	L2	4	8
		Or			
	b i	Explain about Global climatic models and their potential for seasonal climate forecasting.	L2	4	8
	ii	How can weather prediction models assist farmers in planning and optimizing their agricultural activities? Explain with examples.	L2	4	8
15.	a i	Explain in detail about decision support systems.	L2	5	8
	ii	Explain about e-commerce and its applications.	L2	5	8
		Or			
	b	Explain the role of e-Governance in transforming agricultural systems and the rural economy.	L2	5	16