

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026****Sixth / Seventh Semester****Agricultural Engineering****AI3021 IT IN AGRICULTURAL SYSTEM****(Common to CSE)****Regulations - 2021****Duration : 3 Hrs****Maximum : 100 Marks****PART – A(ANSWER ALL QUESTIONS) (Marks 10*2=20)**

Q.No	Questions	BTL	CO	Marks
1.	What is a yield mapping system?	L1	1	2
2.	List any two benefits of using remote sensing in agriculture.	L1	1	2
3.	Define expert systems in horticulture	L1	2	2
4.	State the role of artificial light systems in greenhouses.	L1	2	2
5.	Illustrate the use of linear programming in agricultural systems management.	L2	3	2
6.	Define agricultural systems management.	L1	3	2
7.	Differentiate between climate variability and climate change.	L2	4	2
8.	Outline the role of global climatic models in weather prediction.	L2	4	2
9.	Define expert system.	L1	5	2
10.	Differentiate between e-commerce and e-business in agriculture.	L2	5	2

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

Q.No	Questions	BLT	CO	Marks
11. a	i Explain the working of GPS and GIS in precision farming.	L2	1	8
	ii Discuss the concept of crop production modeling.	L2	1	8
Or				
b	i Illustrate how remote sensing applications assist in crop monitoring.	L2	1	8
	ii List and explain components of a precision agriculture system.	L2	1	8
12. a	i Discuss the applications of CO ₂ consumption models in greenhouse automation.	L2	2	8
	ii Discuss challenges of greenhouse automation.	L2	2	8
Or				
b	i Explain the application of expert systems in horticulture.	L2	2	8
	ii Interpret how expert systems predict greenhouse yields.	L2	2	8
13. a	i Explain the use of AI techniques in agricultural systems.	L2	3	8
	ii Demonstrate how reliability assessment can be applied to schedule timely maintenance of irrigation systems.	L3	3	8
Or				
b	i Discuss role of decision support systems (DSS) in agricultural management.	L2	3	8
	ii Illustrate how linear programming techniques can be applied to balance crop rotation for both profit and soil health.	L3	3	8

14.	a	i	Apply the General Systems Approach to explain how farmers can plan irrigation schedules during drought years.	L3	4	8
		ii	Differentiate between short-term and long-term weather models.	L2	4	8
	Or					
	b	i	Apply a global climatic model to estimate rainfall for the next cropping season using historical weather data.	L3	4	8
		ii	Summarize how climate models help in reducing agricultural risks.	L2	4	8
	15.	a	i	Apply the concept of decision support systems to improve decision-making in rural agricultural cooperatives with a suitable example.	L3	5
ii			Analyze the differences between expert systems and decision support systems in the context of agricultural problem-solving.	L4	5	8
Or						
b		i	Apply the concept of e-learning to design a simple knowledge-sharing model for farmers in remote areas.	L3	5	8
		ii	Analyze the role of agricultural databases in rural development.	L4	5	8