

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024***Second Semester**Agricultural Engineering***AI3201 - Principles and Practices of Crop Production***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 Agriculture.	RE	1	2
2.	What is phototropism?	RE	1	2
3.	What do you understand by mechanical manipulation?	RE	2	2
4.	What is seed treatment and give two examples?	RE	2	2
5.	Define fertigation.	RE	3	2
6.	Write a short note on organic source of nutrients.	RE	3	2
7.	What are oilseed crops and give two examples?	RE	4	2
8.	List out types of fodder crops with examples.	RE	4	2
9.	Define horticulture.	RE	5	2
10.	Define climacteric fruit with examples.	RE	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Explain how various environmental factors impact crop growth and productivity.	UN	1	7
	ii Explain the cultural practices like crop rotation, intercropping and mulching enhance crop resilience and productivity.	UN	1	6
	Or			
	b i Explain the main characteristics and economic importance of any five major field and horticultural crops.	UN	1	9
	ii Write detailed note about genetic factors that influence crop growth and yield.	UN	1	4
12.	a i Discuss the challenges and benefits of selecting crops based on regional and seasonal factors.	AP	2	5
	ii Give a lucid account on advantages and disadvantages of different crop production systems viz., monocropping, intercropping, mixed cropping and sequential cropping.	AP	2	8
	Or			
	b i Spacing and arrangement of crop plants affect crop yield and quality - Discuss with suitable examples.	AP	2	5
	ii What is modern concept of tillage and discuss different modern concepts of tillage with examples?	AP	2	8

13.	a	i	Write an essay about mechanical, chemical and biological methods of weed control in various crops.	UN	3	7
		ii	Explain the effectiveness of various irrigation methods in terms of water use efficiency, crop productivity and environmental sustainability.	UN	3	6
	Or					
	b	i	Classify the methods of nutrient application and how do they differ in terms of effectiveness and efficiency?	UN	3	7
		ii	Classify the different types of harvest. Brief about strategies for determining the optimal harvest time for various crops.	UN	3	6
14.	a	i	Discuss the role of green manure crops in improving soil fertility and best practices for integrating green manure into crop rotations.	UN	4	8
		ii	Discuss the following sentence with suitable examples - Nutrient and pest management in cotton significantly contribute to quality fiber production.	UN	4	5
	Or					
	b	i	Give a detailed discussion on cultivation practices for sugarcane in Tamil Nadu with an emphasis on land preparation, planting techniques, irrigation and nutrient management.	AP	4	7
		ii	Describe the agronomic practices involved in groundnut from sowing to harvest and what are the challenges and opportunities in maximizing groundnut yield?	AP	4	6
15.	a	i	Explain about nutrient and post-harvest management practices followed in jasmine and rose.	UN	5	6
		ii	Write a lucid note about important cultural practices followed in banana cultivation.	UN	5	7
	Or					
	b	i	How do crop rotation, soil preparation and fertilization practices differ between vegetable crops?	UN	5	8
		ii	Explain the effective management practices for protected cultivation in Tamil Nadu.	AN	5	5

*PART - C (Marks 1*15 = 15)*

<i>Q.No</i>	<i>Questions</i>			<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	i	Discuss in detail how different types of seed treatments influences crop growth, yield and pest and diseases.	AP	2	9
		ii	How do factors like climate, topography and soil types across Tamil Nadu influence the selection of horticultural crops?	AP	5	6
	Or					
	b	i	What are the main principles of integrated crop management? How integrated nutrient and pest management contribute to sustainable agriculture?	AN	3	6
		ii	Discuss the cultivation practices for rice in Tamil Nadu with a focus on nutrient management, water management and pest control. How do these practices contribute to maximizing yield and ensuring sustainability?	AN	4	9