

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Fifth Semester

Agricultural Engineering

AI3501 - Farm Equipment and Machinery

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.	List out the benefits of farm mechanization.	RE	1	2
2.	Differentiate trailed and mounted implement.	UN	1	2
3.	Mention one advantage of using a disc plough.	RE	2	2
4.	Name any two types of cultivators.	RE	2	2
5.	What is the purpose of a furrow opener?	RE	3	2
6.	Define a seed cum fertilizer drill.	RE	3	2
7.	What is droplet size in spraying applications?	RE	4	2
8.	Write two types of weeding tools.	RE	4	2
9.	Define a combine harvester.	RE	5	2
10.	What is a baler used for?	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 Explain the different methods of tillage and their purposes. Or	AP	1	13
	b Analyze the factors affecting field capacity and the forces acting on tillage tools.	AP	1	13
12.	a Explain the construction details and working principles of a mould board plough along with its types. Or	UN	2	13
	b Describe the design and applications of disc harrows, bund formers, ridgers, and basin listers.	UN	2	13
13.	a Explain the various crop planting methods and row crop planting systems. Or	UN	3	13
	b Discuss the workings of seed cum fertilizer drills and the importance of accurate fertilizer metering.	UN	3	13

14.	a	Interpret the different types of weeding equipment and their specific uses in dryland and wetland environments.	AP	4	13
		Or			
	b	Elaborate the factors affecting spray application rates and the determination of droplet sizes.	AP	4	13
15.	a	Describe the construction and working of a vertical conveyor reaper and binder.	AP	5	13
		Or			
	b	Summarize the uses and types of balers and threshers in crop harvesting.	AP	5	13

*PART – C (Marks 1*15 = 15)*

<i>Q.No</i>		<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	A rice farmer is struggling to manage weeds in wetland conditions and is considering investing in wetland-specific weeding tools. Evaluate the potential effectiveness of a rotary weeder and a conoweeder in this setting.	AN	4	15
		Or			
	b	A multi-crop farmer is looking to invest in a baler to handle straw and crop residue more efficiently. Evaluate the benefits of using a baler for residue management and outline the factors the farmer should consider before making this investment.	AN	5	15