Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2025

Sixth Semester

Agricultural Engineering

AI3601 - Post-Harvest Technology

Regulations – 2021

Duration: 3 Hrs ***Maximum: 100 Marks***

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

Q.No	*Questions*	*BLT*	*CO*	*Marks*
1.	Draw flowchart for PHT process.	L2	1	2
2.	Define moisture content.	L1	1	2
3.	Write a formula for humidity ratio.	L1	2	2
4.	List out the application of psychrometric charts.	L2	2	2
5.	Mention two functions of an air screen cleaner.	L2	3	2
6.	What is the purpose of a colour sorter in seed processing?	L1	3	2
7.	Differentiate between a husker sheller and a regular maize sheller in terms of function and efficiency.	L1	4	2
8.	Identify the key components of a bucket elevator used in agriculture.	L2	4	2
9.	Mention two common methods used in pulse milling.	L2	5	2
10.	Demonstrate the merits of paddy processing.	L2	5	2

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

Q.No		*Questions*	*BLT*	*CO*	*Marks*
11.	a	Explain the components, working principle, operating procedure, and applications of a power-operated thresher.	L1	1	16
		Or			
	b	Discuss about the Equilibrium Moisture content and its measurement techniques, also explain with illustrations about any one of the Moisture evaluation method.	L1	1	16
12.	a	Evaluate different types of grain dryers (batch, continuous, fluidized bed, etc.) and propose the best one for a farm with limited labor and high crop yield.	L4	2	16
		Or			
	b	Compare thin-layer and deep-bed drying methods in terms of heat and mass transfer. Under which circumstances would deep-bed drying be a disadvantage? Justify.	L4	2	16

13.	a		Describe the principle and working of TWO types colour sorters with neat sketch.	L2	3	16
			Or			
	b	i	Describe the working principle and components of an inclined belt separator. How does belt angle and speed influence separation?	L2	3	8
		ii	Illustrate with neat sketch about the magnetic separator with all its parameters.	L2	3	8
14.	a		Discuss the working principle, components, and operation of a groundnut decorticator. Assess its effectiveness in separating kernels from husks while maintaining seed quality.	L3	4	16
			Or			
	b		Discuss the principles, components, and applications of pneumatic conveying systems in material handling. How do they compare to mechanical conveyors in terms of efficiency and cost?	L3	4	16
15.	a		Describe about the TNAU method of parboiling process with neat sketch.	L2	5	16
			Or			
	b		Describe the oil seed processing methods, including the steps involved in extraction and refining. Discuss the merits and demerits of mechanical and solvent extraction methods.	L2	5	16