

c. Define Psychrometric chart and state which thermodynamic properties of moist air are represented by Psychrometric chart	2	1
d. Define Abrasion and Friction Process of removal of bran layer from the surface of the brown rice	2	1
e. Define Grading and Cleaning of paddy	2	1
f. Enlist different types of dryers use for grains drying	3	1
g. State the grain/particles paths in cleaner and separators	3	1
h. Define EMC (Equilibrium Moisture Content) and write down the Name of EMC Models which are used in grains drying process	3	1
i. Define parboiling of paddy and state the main objectives of parboiling of paddy	4	1
j. Write on the basis of which properties the below said separators separate the grain material	4	1
i. Indented cylinder separator		
ii. The specific gravity separator		
iii. Spiral separator		
iv. Pneumatic and aspirator separator		

PART – C: (Long Answer Questions)

(10 x 4 = 40 Marks)

Answer ALL questions

	Marks	CO#	PO#
3. a. State the different sections of Rubber Roll Sheller by schematic diagram and describe the working principle of Robber Roll Sheller.	6	1	1
b. Explain the use of Cyclone Separator in rice milling industry	4	1	1
(OR)			
c. Show the basic flow chart of rice milling process	5	1	1
d. Indicate the different by-products of rice milling and state its commercial use	5	1	1
4. a. State the different sections of LSU dryer (Louisiana State University dryer and explain the air distribution system in drying chamber.	6	2	1
b. Explain types of air flow in mechanical drying system	4	2	1
(OR)			
c. Enlist the Rice milling equipment / Machines as per unit operations wise of Rice Milling	5	2	1
d. Describe the operation of Flat Bed Type Batch Dryer for on-farm drying of Agricultural Product	5	2	1
5. a. Determine the value of EMC (M_e) using Henderson's EMC Model for the drying of paddy drying at 40° C and 50% of RH (Relative Humidity of Hot air. The values of constants 'C' = 2.32×10^{-5} and 'n' = 1.98 were taken.	6	3	1
b. Explain Desorption EMC and Absorption EMC by curve	4	3	1
(OR)			
c. Describe the working of Rotary Air Screen Cleaner	6	3	1
d. Enlist different EMC Models use to predict the EMC values in drying of Agricultural Products and state the equation of Henderson's EMC Model	4	3	1
6. a. Describe the working of Deep bed dryer with schematic diagram	5	4	1
b. Explain the Constant drying and Falling drying rate with drying curve shows the characteristics of drying of Agricultural Products	5	4	1
(OR)			
c. Describe different types of Screens opening use in screener/cleaner equipment for cereal, pulses and oil seed crops.	5	4	1
d. State the Advantages and Disadvantages of Rotary Dryer	5	4	1

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