A Reg. No. : | | | | | | | | | | |

Question Paper Code: 54A02

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Fourth Semester

Agriculture Engineering

15UAG402-POST HARVEST TECHNOLOGY

(Regulation 2015)

(Psychurometry chart should provided)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Optimum moisture content for threshing of paddy CO1- U

(a) 20-25 % (b) 18-20 % (c) 14-18 % (d) 10-14 %

2. The heat which causes an increases or decreases in the temperature of a body without changing its state is _____ CO1- R

(a) Latent heat (b) Sensible heat (c) Total heat (d) None of these

3. Amount of heat needed to raise the temperature of unit mass by 1°C CO2 -R

(a) Specific heat (b) Thermal conductivity

(c) Thermal diffusivity (d) Enthalpy

4. Physical separation of contaminants from foods is possible when the food has a regular well-defined CO2- R

(a) Shape (b) Color (c) Size (d) None

5. Method of conveying granular materials with high speed of air current is called as CO3- R

(a) Belt conveyor (b) Screw conveyor

(c) Pneumatic conveyor (d) Bucket elevator

6. Wheels of a rubber roll sheller rotates in_____ CO3- R

(a) Linear (b) Non -linear (c) time variant (d) time invariant

7. Name of the process of removal of pods of the ground nut is _____ CO4- R

(a) Milling (b) Decortication

(c) Splitting (d) Grinding

8. Parboiling of paddy involves_____ CO4- R

(a) Complete boiling (b) Partial boiling (c) Heavy boiling (d) Dehydration

9. Which of the following conveyor used for bulk containers _____ CO5- R

(a) Flat bed conveyor (b) Roller conveyor

(c) Chain conveyor (d) Pneumatic conveyor

10. Soaking of paddy in parboiling is done to bring the moisture to _____ CO5- R

(a) 30-35% (b) 40-50% (c) 90% (d) 60%

PART – B (5 x 2= 10Marks)

11. Define post-harvest engineering CO1- R

12. Define dew point temperature CO2- R

13. Define enthalpy CO3- R

14. What is wet bulb shelling? CO4- R

15. What is gelatinization in parboiling? CO5-U

PART – C (5 x 16= 80Marks)

16. (a) Explain direct and indirect methods for moisture measurement of grains CO1- U (16)

Or

(b) Assess the merits and demerits of vertical cone rice polisher CO1- U (16)

17. (a) Summarize the operation of a groundnut decorticator. CO2- U (16)

Or

(b) Summarize the operation of husker, Sheller for maize. CO2- U (16)

18.	(a)	(i) Explain the moisture content determination in grains and methods.	CO3-U	(8)
		(ii) Explain inclined belt separator with neat sketch.	CO3-U	(8)
		Or		
	(b)	Explain the working principles of pneumatic conveyor and limitation of pneumatic conveyor.	CO3- U	(16)
19.	(a)	Explain the working principles of a maize sheller with a neat diagram.	CO4- U	(16)
		Or		
	(b)	Explain the importance and precautions of shelling equipments	CO4-U	(16)
20.	(a)	Explain different types of oil extraction methods.	CO5-U	(16)
		Or		
	(b)	Describe in detail about traditional methods and mechanical methods of threshings	CO5-U	(16)