

Reg.No. \_\_\_\_\_



# Karunya UNIVERSITY

(Karunya Institute of Technology & Sciences)  
(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

## End Semester Examination – Nov/Dec – 2016

Code : **14FP3006**  
Sub. Name : **Storage Engineering of Grains**

Semester : **2016-17 ODD**  
Duration : **3hrs**  
Max. marks : **100**

### ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)

Q. No.	Sub Div.	Questions	Course Outcome	Marks
1.	a.	Summarise the physical properties of grains and their implications in design of grain storage structures.	CO1	10
	b.	Illustrate the different parts of a wheat Kernel with suitable sketches. Examine why each of these parts are important to human nutrition.	CO2	10
(OR)				
2.	a.	Explain the need to learn about the aerodynamic & thermal properties of grain. How does it influence the actual storage structure?	CO1	20
3.	a.	Describe the changes that take place on the building blocks of a grain during storage.	CO2	10
	b.	Paraphrase the different possible configurations or arrangements that can be given within a thin layer drying system with respect to the Air Flow Vs Grain Flow	CO3	10
(OR)				
4.	a.	Illustrate the 3 different systems that are an important part of the “natural-air-drying system”?	CO2	5
	b.	Interpret the action of fluidization in a dryer?	CO3	5
	c.	Elaborate on the different Traditional storage structures available. Why are traditional structures popular in developing countries?	CO2	10
5.	a.	Briefly, summarize the functioning of the following types of dryers with neat sketches. (i.) LSU Dryer (ii.) Sprouted Bed Dryer	CO2	10 10
(OR)				
6.	a.	Briefly, summarize the functioning of the following types of dryers with neat sketches. (i.) Mixing type – Thin Layer Dryer (ii.) Non-Mixing type – Thin Thin layer Dryer	CO2	10 10
7.	a.	Derive the different types of pressure distribution theories that are used to calculate the pressure load on a grain silo.	CO3	20
(OR)				
8.	a.	Summarize the different Integrated Pest Management Systems used in bag storage structures.	CO2	20
<b><u>Compulsory:</u></b>				
9.	a.	Elaborate upon the different Pests that are commonly found in stored (or) pantry foods.	CO2	20

ALL THE BEST