

- Q.26 Differentiate between moisture content and equilibrium moisture content. (CO3)  
 Q.27 Discuss the influence of moisture content, relative humidity, temperature on stored grain products. (CO4)  
 Q.28 Explain the working principle of Screw conveyor with a neat diagram. (CO1)  
 Q.29 Enlist different grains drying system and discuss the continuous flow drying system. (CO3)  
 Q.30 Describe various frictional properties of agricultural materials. (CO2)  
 Q.31 Discuss various types of insects that affect the stored grains. (CO4)  
 Q.32 Describe the concept of controlled and modified atmosphere storage. (CO5)  
 Q.33 Explain the oven drying method of moisture determination along with formulas. (CO3)  
 Q.34 Define packaging. Enlist different packaging materials. (CO5)  
 Q.35 Write the different losses during storage of grains and how will you control them? (CO4)

#### **Section-D**

- Note:** Long answer questions. Attempt any two questions out of three Questions. (2x10=20)  
 Q.36 Discuss various post-harvest treatments to increase the self-life of fruits and vegetables in detail. (CO5)  
 Q.37 Explain the various post-harvest operations of agricultural products and their utility in agricultural processing. (CO1)  
 Q.38 Enlist different types of grain dryers. Explain in detail about fluidized bed dryer with diagram. (CO3)

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**4th Sem. Branch: AGRI ENGG.**  
**Sub : Post Harvest Technology**

Time : 3 Hrs. M.M. : 100

#### **SECTION-A**

**Note: Multiple choice Questions. All Questions are compulsory. (10x1=10)**

- Q.1 Post harvest technology includes (CO1)  
 a) Packaging b) Storage  
 c) Marketing d) All of these  
 Q.2 Formula for calculating the thermal conductivity is (CO2)  
 a)  $K \cdot A \cdot \Delta T$  b)  $K \cdot \Delta T$   
 c)  $K \cdot A$  d) None of these  
 Q.3 A uniform grain moisture content after drying is obtained in (CO-3)  
 a) Batch drying  
 b) Sun drying  
 c) Continuous flow drying  
 d) All of these  
 Q.4 Angie of repose is a \_\_\_\_\_ property of agricultural material. (CO2)  
 a) Physical b) Mechanical  
 c) Thermal d) Frictional

- Q.5 When temperature rises and relative humidity of air decreases the grain will \_\_\_ the moisture content. (CO3)  
 a) Loose                    b) Gain  
 c) Static                   d) None of these
- Q.6 Which of the following is not artificial drying method. (CO3)  
 a) Convective drying      b) Contact drying  
 c) Sun drying              d) Radiation drying
- Q.7 Insect which follows the destruction already started by the major insect is known as (CO4)  
 a) Parasite                b) Incidental  
 c) Major                   d) Minor
- Q.8 Which of the following is a permanent storage structure. (CO4)  
 a) Pusa bin                b) Vertical silos  
 c) Muda                    d) Mud khoti
- Q.9 Proper post-harvest cooling can. (CO5)  
 a) Slow the growth of decay  
 b) Increase the decay  
 c) Both A & B  
 d) None of these
- Q.10 The packaging which results in accumulation of CO<sub>2</sub> and depletion of O<sub>2</sub> is. (CO5)  
 a) Packaging  
 b) Putting  
 c) Modified atmosphere packaging  
 d) None of these

- Section-B**
- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Name any two material handling equipment. (CO1)  
 Q.12 Define elasticity of agriculture materials. (CO2)  
 Q.13 Modern storage structure comparatively require \_\_\_\_\_ space. (More/Less) (CO4)  
 Q.14 Name any two types of packaging material. (CO5)  
 Q.15 What is cool-chain? (CO5)  
 Q.16 Storage structure in which the plane of rupture meets the grains surface before its strikes the opposite side is called \_\_\_\_\_. (CO4)  
 Q.17 Define drying of grain. (CO3)  
 Q.18 Morari type is a \_\_\_\_\_ storage structure. (CO4)  
 Q.19 The losses in storage due to chemical change in protein, carbohydrates and fat are called \_\_\_\_\_. (CO4)  
 Q.20 When the group of trays is stationary, the drying system is said to be \_\_\_\_\_. (CO3)

- Section-C**
- Note:** Short answer type Questions. Attempt any twelve questions out of fifteen Questions. (12x5=60)
- Q.21 What is the scope of post-harvest technology in the present situation? (CO1)  
 Q.22 How will you represent the moisture content of grain? (CO3)  
 Q.23 Describe the Infra-red method of moisture content determination. (CO3)  
 Q.24 Discuss different thermal properties of Agricultural products. (CO2)  
 Q.25 How the space requirement of bag storage structure is assessed? (CO4)