KERALA AGRICULTURAL UNIVERSITY

B.Tech.Food Engg. 2013 Admission

VIIth Semester Final Examination-February - 2017

Cat. No: Fdpr. 4107 **Marks: 50**

Title: Storage and Preservation Technology (1+1) **Time : 2 hours**

I. Fill up the blanks/ Define the following : **(10 x 1=10)**

1. ---------- gas is used as an inert gas in packaging.
2. Stack to stack distance in 500 ton grain warehouse should be ---------- m
3. Temperature inside silos can be controlled by ----------
4. In godown, space for inspection and disinfection of stacks is provided, which is generally about ---------- %
5. Pressure inside the vacuum packaging is ---------- than atmospheric pressure.
6. Bag storage.
7. Pressure drop.
8. Fumigation.
9. Aeration.
10. CAS

II. Write short notes/answers on ANY FIVE: **(5x 2=10)**

1. Discuss types of pests in storage.
2. Write a note on functional requirements of storage.
3. Explain shallow bin.
4. Write Rankine's equation for lateral pressure estimation.
5. Write a note on factors to be considered in design of bag storage.
6. Explain importance of aeration in storage.
7. Discuss storage of processed fruits and vegetables.

III Write answers on ANY FIVE: **(5 x 4=20)**

1. Discuss in detail about factors to be considered in storage of perishables.
2. Explain principle and application of CAS.
3. Discuss control of temperature and humidity in storage bin.
4. Design a RCC silo for storing one tonne of grains.
5. What are the advantages of metal bins over RCC silo?
6. Explain in detail about construction of Pusa bin.
7. Write a note on pressure distribution in bins.

IV. Write essay on any ONE **(1 x 10=10)**

1. Derive Janssen's formula for determining lateral pressure in storage bin.
2. Design and layout for bag storage for storing 100 tonne of grain.

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