



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Agrl. Engg.) 2022 & Previous admissions
V Semester Final Examinations - January 2025

Fape.3104

Agricultural Structures and Environmental Control (2+1)

Marks: 50
Time: 2 hours

I Fill in the blanks (10x1=10)

1. The bird density of free-range system is _____.
2. A minimum slope of _____ percent should be provided so that the gutter may drain into the manure pit outside the barn.
3. Loose housing barn is also known as _____.
4. Safe storage (1 year) moisture limit for paddy is _____ on wet basis.
5. A squat silo has a wall height to diameter ratio of _____ or less.
6. Bulk density is always _____ than true density.
7. The drinking water should have TDS value of less than _____ ppm.
8. The capacity of *Mud Kothi* (Mud bin) varies from _____.
9. To make Pusa bin moisture proof, a film of _____ gauge plastic is used on inner side of the bin.
10. Bunker storage structure is used for _____ term storage of a larger volume of grains.

II Write short notes on ANY FIVE of the following (5x2=10)

1. Hermetic storage
2. Composting
3. Cage type poultry house
4. Homeothermy
5. Electric fencing
6. Plain sedimentation for water treatment
7. Herringbone type milking parlor

III Answer ANY FIVE of the following (5x4=20)

1. Detail about the size and arrangement of farmstead.
2. Explain aerobic composting process.
3. Design a trench silo for a small farm having 140 buffaloes weighing 680 kg each and has to be fed at the rate of 4 kg/100 kg of its weight. The silage is fed 160 days in a year.

Given Data:

No. of animals = 140

Wt. of each animal = 680 kg

Feeding rate = 4 kg / 100 kg of body weight

No. of days of feeding = 160 days

4. What are the layers of a road structure?
5. Differentiate between face in and face out arrangement of dairy barn.
6. Explain deep litter poultry housing system. What are the advantages and disadvantages of this system?
7. Classify the impurities present in water.

IV Write an essay on ANY ONE of the following (1x10=10)

1. Detail about the factors affecting aerobic composting.
2. Describe briefly *Morai* type storage structure. Explain construction details of improved *Morai* structure with a neat diagram.
