



KERALA AGRICULTURAL UNIVERSITY
B.Tech. (Agri. Engg.) 2023 & previous admissions
V Semester Final Examination - January 2026

Fape.3104

Agricultural Structures and Environmental Control (2+1)

Marks: 50

Time: 2 hours

I

Fill in the blanks

(10x1=10)

1. A minimum bed slope of % should be given for the gutters to drain without any stagnation.
2. Mangers are feeding structures for the animals the width of manger varies from
3. poultry housing system is suitable for warm climatic region.
4. Grain is stored by retarding biological activity to a minimum by reducing the and temperature or by combination of both.
5. A heating system must be installed in the brooder house to maintain the required temperature of
6. Non sweating animals adjust to high ambient temperature by increased rate of
7. The passage between outer wall and manger used to move push cart containing silage is called as.....

State True or False

8. With high relative humidity, for animal comfort, the air temperature should be higher
9. Sub soil is the ground underlying the road after the removal of top soil.

Answer the following

10. What should be the minimum total area of window opening as compared to floor area of the room?

II

Write short notes on ANY FIVE of the following

(5x2=10)

1. Give advantages and disadvantages of head to head stall barn.
2. Enlist different methods for cost estimation of farm structures.
3. Short note on fodder silos.
4. Define following:
 - (a) angle of repose
 - (b) coefficient of friction
5. Enlist the salient features of cage house poultry system.
6. Write a short note on types of impurities present in drinking water.
7. Based on the material of construction, briefly state the types of roads.

III

Answer ANY FIVE of the following

(5x4=20)

1. Explain in detail the factors which are considered for site selection of farmstead.
2. Differentiate between deep bin and shallow bin.
3. Write a short note on septic tank for domestic waste disposal.
4. What are the different sources of grain spoilage and enlist measures to avoid it?
5. Describe the different factors that affect the aerobic composting process.
6. Explain the standard constructional details of the pig housing structure.
7. A R.C.C. cylindrical grain storage bin has internal diameter of 5 m and is 20 m deep. It is completely filled with paddy weighing 600kg/m³. The angle of internal friction for paddy can be taken as 35° while the angle of friction between paddy and bin wall is 30°. The ratio of horizontal and vertical pressure intensities, k is 0.4. Calculate the lateral pressure intensity at 2 and 4 m.

IV

Write an essay on ANY ONE of the following

(1x10=10)

1. Design a bag storage structure for storing 250 tonnes of paddy consider a bag of length 1.0, Width 0.6, Height 0.3 of 75kg assume necessary data.
2. State the different water purification methods that are suitable for rural community.
