

# KERALA AGRICULTURAL UNIVERSITY

B.Tech (Agri.Engg) 2012 Admission

VI<sup>th</sup> Semester Final Examination- June/July 2015

Cat. No: Phpt.3205

Title: Agricultural structures and Environmental Control (2+0)

Marks: 80

Time: 3 hours

## I. Fill in the Blanks:

(10x1=10)

1. The extent of area of farmstead varies from \_\_\_\_\_ % of the total farm-area.
2. The water tight container in which untreated domestic sewage is let into for digestion by bacteria is called \_\_\_\_\_
3. \_\_\_\_\_ is the type of barn where cows are housed in a yard but milked in batches in a separate parlour.
4. The width of gutter in the stanchion barn is \_\_\_\_\_ cm
5. Cage houses (poultry) are generally built in \_\_\_\_\_ region.
6. The required floor space for each chick in a brooder house is \_\_\_\_\_ sq.cm.
7. \_\_\_\_\_ are the arrangements provided in a poultry house for the birds to sit on when they like.
8. The slump test is performed to measure \_\_\_\_\_ of the concrete.
9. The respiratory demand for oxygen exerted by micro organisms, while stabilizing the organic matter under aerobic conditions is called \_\_\_\_\_
10. The common size of bricks made in India is \_\_\_\_\_

## II. Write short notes on any TEN of the following:

(10x3 = 30)

1. Farm house
2. BIS - Dairy
3. Soakage pit
4. Barbed wire fencing
5. Manger
6. Feed trough
7. Rural roads
8. Pen barn
9. Timber - a building material
10. COD
11. Service alley.
12. Sedimentation of food plant waste.

**III. Write short essays on any SIX of the following:**

**(6x5=30)**

1. Briefly explain the construction details of a pit silo.
2. Describe the construction of a septic tank with a neat sketch.
3. With a diagram, explain the various components of a face-out type stanchion barn.
4. Give the construction procedure of a wire floored poultry house with a sketch.
5. What are the different roads used for a farmstead? Explain the construction of any one road.
6. What are the types of timber that can be used for building construction. Also list the different defects in timber.
7. Give a detailed account on sheep housing.
8. Describe the importance of BOD and COD of food plant waste during its treatment.

**IV. Write an essay on any ONE of the following:**

**(1x10=10)**

1. Describe the secondary treatment processes of a food plant waste.
2. Design a trench silo for a small farm having the following herd. The silage is fed 170 days in a year at the rate of 3.8 kg per 100kg of animal body weight.

Animal breed	Body wt per animal, kg	Total no. of animals	Rate of feeding per 100 kg of body wt.
Murrah buffaloes	680	40	4.5
Haryana cows	450	50	3.5
Bullocks	500	30	4.0
Heifers	180	20	3.0