

EASTERN UNIVERSITY, SRI LANKA

THIRD YEAR SECOND SEMESTER EXAMINATION IN AGRICULTURE-2016/2017

(July-2019)

AE 3201- FARM STRUCTURES AND ELEMENTARY SURVEY

Answer **all** questions

Time: One hour

1. a. "Safe storage is an important aspect in farm production". Justify the statement and mention the requirements for safe storage in a tropical climate.
- b. Animal behavior plays an important role in planning and designing of animal houses. Justify the statement.
2. a. Briefly explain the steps involved in the manufacture of cement by wet process with flow diagram.
- b. Assume a 1:4:5 cement- sand- stone concrete mix by volume using naturally moist aggregates and adding 65 litres of water and two bags of cement. By using the following additional assumptions:
 - Moisture content of sand - 4.5%
 - Moisture content of stones - 1.4%
 - Bulk density of sand - 1400 kg/m³
 - Bulk density of stones - 1600 kg/m³
 - Solid density of aggregate materials - 2650 kg/m³
 - Solid density of cement - 3100 kg/m³
 - Density of water - 1000 kg/m³

Calculate the following;

- i. Water-cement ratio and aggregate-cement ratio.
- ii. Final volume of concrete mix.
