



KERALA AGRICULTURAL UNIVERSITY

B.Sc.(Hons).Forestry 2017 Admission

IV Semester Final Examination-July 2019

Safo.2210

Soil Biology and Fertility (2+1)

Marks: 50

Time: 2 hours

(10x1=10)

I Define

- 1 Regolith
- 2 Nutrient ratios
- 3 Mineralisation
- 4 Straight fertilizers
- 5 Field Capacity

State whether the following statements are true or false

- 6 Carbon dioxide content in the soil air usually decreases and the oxygen contents increases with the increase in soil depth.
- 7 Application of fertilizer before sowing the seed is called as top dressing.
- 8 Fertilizer that supplies the entire three major plant nutrient element in required proportions is known as complete fertilizer.
- 9 Beginning of necrosis at the leaf tip that progress along the midrib until the death of leaf is a deficiency symptom of Nitrogen.
- 10 Formation of Kaolinite is a result of weathering of granite.

(5x2=10)

II Write short notes on ANY FIVE

- 1 Compare and contrast the Podzolisation vs Laterisation.
- 2 List the forms in which nutrients are utilized by plants.
- 3 Significance of soil fungi.
- 4 Differences between Forest soil and cultivated soil .
- 5 Criteria of essentiality of plant nutrients.
- 6 Benefits of green manure.
- 7 Role of zinc in plant growth.

(5x4=20)

III Answer any FIVE of the following.

- 1 Classify the organic manures with suitable examples for each type.
- 2 Factors affecting the soil productivity.
- 3 Carbon cycle.
- 4 Functions of Mycorrhizae.
- 5 Symbiotic nitrogen fixation.
- 6 Soil properties of tropical rain forest.
- 7 Ecological significance of a. Earthworms b. termites

(1x10=10)

IV Answer any ONE of the following

- 1 Major constituents of soil organic matter. Explain decomposition process of organic matter and the factors affecting it in detail.
- 2 Factors of soil formation. Discuss the basic soil forming processes in detail.
