

KERALA AGRICULTURAL UNIVERSITY
B.Sc (Hons.) Agriculture – 2010 Admission IIIrd Semester
Final Examination – January / February 2012

Title : Ssac. 2103

Marks : 80

Course : Organic farming and Soil Health (1+1)

Time : 3 Hours

I. Fill up the blanks / Match the following/ State True or False/ Define: (10 x 1 = 10)

1. Define biofertilizer.
2. The legume fixation of nitrogen is atleast _____ of industrial fixation.
3. The most important green house gas is CO₂. (T/F)
4. Expand BOD _____ and COD _____.
5. _____ earthworm is a voracious feeder.
6. Arsenic is the heavy metal present in sewage effluent. (T/F)
7. Define Symbiosis.
8. Bones contain the major nutrient _____.
9. Define Soil health.
10. The rock phosphate fertilizers add contaminants to the soil. (T/F)

II. Write short notes/answers etc. on ANY TEN (10 x 3 = 30)

1. Give the biology of rhizobium nodules
2. Enumerate the types of microbial inoculants
3. Briefly describe Enriched Farm Yard Manure.
4. List out the characteristics based on which the earth worms are selected for vermi technology.
5. What soil micro organisms are responsible for oxidation of elemental sulphur? Which group is the best known and thoroughly investigated.
6. List out widely used earthworm species and its characteristics
7. Write a short note on non edible oil cakes.
8. How organic products are certified, labeled and marketed?
9. What are the general limitations for waste material application to soils?
10. What is meant by biocycling of phosphorous?
11. What are the effects of sewage waste application on soil characteristics and crop responses?
12. Compare INM and organic farming

III. Write short essays on ANY SIX of the following (6 x 5 = 30)

1. Explain the recycling of organic wastes by micro organisms.
2. Describe the role of earthworms in soil fertility.
3. How will you ensure the standard of organic manure?
4. What are the harmful effects of non judicious use of chemical fertilizers?
5. List out N and P biofertilizers and enumerate their advantages.
6. Describe the role of micro organisms in industries.

PTO

7. Explain the following.

- i. NPOP regulations
- ii. CO₂ fixation
- iii. N fixation

8. How micro organisms are helpful in the degradation of pesticides?

IV. Write essay on ANY ONE

(1 X 10 = 10)

- 1. Describe the principles and practices of Integrated Plant Nutrition System
- 2. Explain Nitrogen cycle in Soil.