

KERALA AGRICULTURAL UNIVERSITY
B.Sc.(Hons.) Agriculture – 2007 Admission – IIIrd Semester
Final Examination – February/March 2009

Title : Ssac. 2103

Max. 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 : (20 X 0.5) = 10

a. Fill up the blanks

1. Organic manures are grouped in to ----- and ----- manures
2. Average N content in FYM is -----
3. The atomic weight of heavy metal is more than -----
4. Vermicomposting refers to the use of -----for composting of organic residues
5. In India ----- is the leading state in practicing organic farming
6. Expansion of APEDA is -----
7. ----- is the stem nodulating green manure
8. ----- gas is produced during decomposition of organic matter under anaerobic condition (water logged situation)
9. ----- is involved in the conversion of nitrite to nitrate
10. NPOP was launched in India during the year -----

b. Match the following

- | | |
|--|------------------------------------|
| 11. Indore method of composting | - 20:1 |
| 12. Bangalore method of composting | - FYM |
| 13. C : N ratio for net mineralization | - Aerobic composting |
| 14. C : P ratio for net mineralization | - Aerobic cum anaerobic composting |
| 15. Bulky organic manure | - 200:1 |

C. State true or false

16. Sewage and sludge usage is banned in Organic farming
17. Fertilizer usage is one of the source for heavy metal pollution in soils

18. Nutritional composition of FYM varies with types of feed consumed by animals
19. The C:N ratio of oil cakes is narrow
20. Organic farming certification agencies can withdraw certification from the organic farming operator if there is any violation in the norms

II. Write answers in a word or sentence/Define

(10 X 1=10)

1. Organic farming
2. Composting
3. Ammonification
4. Soil enzymes
5. Nutrient enrichment
6. Soil health
7. Rhizobium
8. INM
9. Lignin
10. VAM

III. Write short notes/answer etc on Any Ten

(10 x2=20)

1. Drawbacks in composting
2. Any two species of earthworm used in vermicomposting
3. Ideal condition for compost preparation
4. Bio remediation
5. Parameters to be considered in soil health
6. Limitations in green manure usage
7. Nutrient immobilization
8. Name any two bacteria and enzyme involved in cellulose decomposition
9. Narrate the steps involved in conversion of nitrogen to nitrate
10. Biofertilizers
11. Nutrient composition of vermicompost
12. Quality parameters for organic manures

IV. Write short essays on Any Four

(4 x 5 =20)

1. Nutrient management practices in organic farming
2. Aerobic and anaerobic method of composting and its preservation
3. Note on IPNS
4. Beneficial and harmful role of soil microflora
5. Various sources and permissible limit for heavy metal contamination
6. Describe various compounds of organic matter

V. Write essays on Any Two

(2 X 10=20)

1. NPOP procedure for organic farming certification, Labeling, accreditation process and marketing
2. Describe Carbon cycle and CO₂ fixation in the light of soil health
3. Role of bacteria in biological nitrogen fixation and its importance in soil fertility maintenance
