

KERALA AGRICULTURAL UNIVERSITY
B.Sc. (Ag) 2003 Admission - V Semester Final Examination
July/August 2006

Chem 306
Manures & Fertilizers (1+1)

Max. Marks: 60
Time: 2 hours

I Answer all questions (20x0.5=10)

Answer yes or no

1. Phosphorus is a component of protoplasm
2. Oxygen is a mineral nutrient to plant
3. To convert Ca to CaO - multiply by 1.4
4. Manganese is absorbed by plants as Mn^{2+}
5. Deficiency of molybdenum causes interveinal chlorosis in plants
6. Potassium sulphate contains 41 to 44 % K
7. Muriate of potash + sulphuric acid \rightarrow potassium bisulphate + HCl
8. Ammonium sulphate contains 26% N
9. Nitrobacter converts nitrite to nitrate
10. Triple super phosphate contains 19 to 23 % P_2O_5
11. Super phosphate contains 8 to 10 % sulphur

Choose the right answer:

12. Hargreaves process is for purifying a) sulphur fertilizer b) P fertilizer c) K fertilizer
13. Slaked lime is a) calcium oxide b) calcium hydroxide c) kilned lime
14. Apatites are a) Mg minerals b) P minerals c) K minerals
15. All K fertilizers are a) water soluble b) partially water soluble c) water insoluble
16. Salt peter is a) KCl b) KNO_3 c) KOH
17. Basic slag does not contain a) Ca b) P c) N
18. Crotonylidene diurea is a) slow release fertilizer b) ammoniacal fertilizer c) end product of urea hydrolysis
19. Sodium nitrate fertilizer is a) acidic b) alkaline c) neutral
20. The ideal C:N:P ratio in soil is a) 400:150:60 b) 100:10:1 c) 250:100:50

II Give short answers (6x1=6)

21. Define compound fertilizers
22. Unit value of fertilizers
23. Define farm yard manure
24. What is town refuse?
25. What are the types of mixed fertilizers?
26. List some liming materials

III Give short notes for any six of the following: (6x2=12)

27. Ammonium chloride as a fertilizer
28. Write on sewage sludge
29. What is rock phosphate
30. List the properties of urea.
31. Write on slow release fertilizers
32. What is lime requirement of a soil?
33. List some chelating compounds.
34. Fish manure

IV. Answer in paragraphs for any four of the following: (4x3=12)

35. Write on plants suited for green manuring.

36. Describe the storage and handling of nitrogenous fertilizers.
37. Write the important properties of DAP
38. List materials supplying micronutrients.
39. Explain manufacture of urea.
40. Write on use of soil conditioners
- V. Give short essays for any four of the following: (4x5=20)
 41. Explain methods of increasing nitrogen fertilizer use efficiency
 42. How will you evaluate fertilizers as per Fertilizer Control Order
 43. Describe the behaviour of phosphotic fertilizers in different types of soils
 44. Explain reclamation of saline soils
 45. What are the conditions of soluble P addition to soils?

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