

Question Paper Code : 6077

M.Sc. (Ag.) (Semester-I) Examination, 2017

SOIL SCIENCE AND AGRICULTURE CHEMISTRY

[Fourth Paper : AGR-502]

(Principles and Practices of Soil Fertility and
Nutrient Management)

Time : Three Hours]

[Maximum Marks : 50

Note : Answer **five** questions in **all**, including Question No. 1
which is **compulsory**. Attempt **one** question from each
unit.

1. Describe briefly the following : [2x10=20]
- (a) Soil organic matter
 - (b) Integrated nutrient management
 - (c) NADSP composting
 - (d) Crop residue management
 - (e) Nutrient interactions

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(1)

[P.T.O.]

- (f) Nitrogen cycle
- (g) Fertilizer mixture
- (h) Soil productivity
- (i) Organic manures
- (j) Mycorrhiza

UNIT-I

2. Describe essential plant nutrients with their functions and optimum range in soil for good fertility. [8]
3. Write short notes on the following : [8]
 - (a) Carbon cycle
 - (b) Cations and anions

UNIT-II

4. Describe the methods of farmyard manure preparation, their composition and importance in crop productivity.[8]
5. Write short notes on the following : [8]
 - (a) Composting methods

- (b) Nitrification and nitrate losses

UNIT-III

6. What are commercial fertilizers ? Describe their nutrients composition. [7]
7. Write short notes on the following :
 - (a) Fertilizer use efficiency [4]
 - (b) Cereal crop responses to nitrogen treatment [3]

UNIT-IV

8. Describe the manure and fertilizer application schedules and techniques. [7]
9. Write short notes on the following :
 - (a) Relative performance of organic and inorganic manures [4]
 - (b) Determination of soil organic carbon [3]

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