

This question paper contains **3** printed pages]

Roll No.

--	--	--	--	--	--	--	--	--	--	--

S. No. of Question Paper : **5968**

Unique Paper Code : **2172581001**

Name of the Paper : **DSC : Soil Fertility, Fertilizers and
Micronutrients**

Name of the Course : **B.Sc. (Hons.) in Applied Life Sciences with
Agrochemical and Pest Management**

Semester : **II**

Duration : **2 Hours**

Maximum Marks : **60**

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any *four* questions.

All questions carry equal marks.

1. (a) Answer the following :

- (i) A nitrogenous fertilizer commonly known as 'Chile Saltpetre'.
- (ii) An efficient liming material to correct soil acidity.
- (iii) Oxidation of ammonia or ammonium ions into nitrate ions by nitrifying bacteria.
- (iv) A beneficiary nutrient required by the plants.
- (v) An amide fertilizer containing approximately 46% nitrogen.

P.T.O.

(b) What are the advantages and disadvantages of chemical fertilizers ?

(c) How is ammonium dihydrogen phosphate prepared on small scale ?

5,5,5

2. (a) Explain the different chemical reactions involved in neutralizing soil acidity.

(b) List out the primary and secondary nutrients required by the plants.

(c) How is urea manufactured ? Explain the chemical reactions involved.

5,5,5

3. (a) What is the weathering of rocks ? Explain the different types of weathering.

(b) Phosphatic fertilizers are significant for plant nutrition. Explain the various classes of phosphatic fertilizers along with examples.

(c) What are biofertilizers ? Explain the different types of biofertilizers.

5,5,5

4. (a) What are the different types of soil found in India ? Briefly, explain the characteristics of each type.

(b) What are plant micro-nutrients ? Explain the functions and deficiency symptoms of any *one* micro-nutrient.

(c) Calculate the quantity of urea and MOP required for one hectare of tomato field. The recommended dose of NPK fertilizer is 120:50:40 kg/ha respectively.

5,5,5

5. (a) Explain the preparation and properties of potassium sulphate fertilizer.
- (b) What are the various functions and deficiency symptoms of potassium in plants ?
- (c) List out the differences between nitrification and denitrification.

5,5,5

6. Write short notes on (any *three*) :

- (a) Polymer coated urea
- (b) Organic matter
- (c) Bone meal
- (d) Muriate of potash.

5,5,5