

Roll No. : (in figure) _____ (in words) _____

Student Index No. _____ Regn. No. _____ of _____

Time : Two Hours

Full marks : 50

Questions are of value as indicated in the margin

Part - I
(Objective and Short Answer Type)
(Use only ball point pen)

Time : 30 minutes

Full marks : 20

- Note:** 1. Answer in question paper itself.
2. Striking, rewriting or overwriting are not allowed in the objective type questions.

1. **Fill up the blanks with most appropriate words :** 0.5×10=5

- (a) Ammonium chloride contains _____% nitrogen.
(b) CAN stands for _____.
(c) Permissible limit of biuret in Urea for foliar spray is _____%
(d) _____ is intermediate product of Urea hydrolysis.
(e) Nitrogen use efficiency in rice is _____%
(f) Bone meals contain _____% phosphorus.
(g) Critical limit of available zinc in soils for rice _____ ppm.
(h) Blossom end rot of tomato is due to _____.
(i) The essentiality of sulphur was given by _____ and _____.
(j) Available nitrogen content in soil is determined by _____ method.

2. **Tick (✓) the correct alternatives:** 0.5×10=5

- (a) Diammonium phosphate contains (i) 42% P (ii) 46% P (iii) 42.5% P (iv) 18% P
(b) Plant uptake form of nitrogen is/are (i) NO_3^- (ii) NH_4^+ (iii) both i & ii (iv) NH_3
(c) Availability of sulphur to plants is regulated by (i) clay content (ii) oxides of Fe & Al
(iii) pH (iv) all
(d) Sulphur use efficiency is (i) <5% (ii) > 20% (iii) 12-15% (iv) none
(e) In highly acidic soils which P fertilizer is suitable? (i) rock phosphate (ii) Bone meal
(iii) both i & ii (iv) Single super phosphate
(f) Which one is a straight fertilizer? (i) Urea (ii) DAP (iii) TSP (iv) none
(g) Which one is concentrated organic manure? (i) FYM (ii) Compost (iii) Vermicompost
(iv) Groundnut cake
(h) Nitrophosphate is produced by the reaction of rock phosphate with (i) HNO_3 (ii) HCl
(iii) H_2SO_4 (iv) H_3PO_4
(i) Which micronutrient is deficient in acidic soils? (i) Fe (ii) Zn (iii) Mo (iv) Cu
(j) Micronutrient fertilizers usually have a use efficiency of (i) 2-5% (ii) 5-10% (iii) 15-20%
(iv) none

(2)

Answer the following (any five) :

2×5=10

a) Define soil amendment with suitable examples.

b) Define secondary nutrient fertilizer with examples.

c) Write down the deficiency symptoms of nitrogen in plants.

d) What do you mean by luxury consumption?

e) Enlist the criteria of essentiality and name the essential nutrients for plants.

f) Schematic diagram of N-cycle

g) What are the factors affecting the K-availability in soil.

B.Sc. (Honours) Agriculture Examination, 2018
Semester-III
Course No: SSC-211
(Manures, Fertilizer & Soil Fertilizer Management)

Part - II
(Descriptive Type)

Time : 90 Minutes

Full marks : 30

Questions are of value as indicated in the margin

Answer any three questions

4. What is integrated nutrient management (INM)? Discuss the role of green manuring in INM. Differentiate between green manuring and green leaf manuring. 3+5+2=10
 5. Discuss the mechanisms of nutrient transport to plants. Discuss the various factors affecting availability of phosphorus to plants. 5+5=10
 6. What is plant tissue test? What are the criteria for sampling plant samples for tissue test? Discuss the soil testing method of soil fertility evaluation. 3+2+5=10
 7. What are the different methods of composting? How different types of enriched composts are produced? 6+4=10
 8. Write short notes on the following (**any five**) : 2×5=10
 - a) Micronutrient fertilizers
 - b) Nitrification inhibitors
 - c) Denitrification
 - d) VAM
 - e) Urea hydrolysis
 - f) NUE
 - g) DRIS
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