QPC: RJ19BSCAG049 AR 18 Reg. No

GIET UNIVERSITY, GUNUPUR – 765022

B. Sc (AG) (Fifth Semester – Regular) Examinations, December – 2020

SC -352 : MANUERS, FERTILIZERS & SOIL FERTILITY MANAGEMENT 3(2+1)

Time: 2 hrs Maximum: 50 Marks

(The figures in the right hand margin indicate marks.)

SECTION A

(Answer **all** questions of Section – A)

Q.1 Fill in the Blanks with suitable and meaningful word(s)/ figures: **[0.5 X 10 = 5]**

A) Urea contains ……. % N.

B)Luxury consumption in plant is associated with -------- nutrient.

C) ……..Nutrientis mostly related to root growth of plants.

D) Bone meal is a ……. Manure.

E)Loss of chlorophyll, growth and protein occurs due to ----------nutrient deficiency.

F) K_2O = K x ……..

G)Nano fertilizer particles size ranges ---------- m

H)Cracking is a common deficiency symptom of --------- nutrient.

I)For extraction of ---------- nutrient neutral normal ammonium acetate is used.

J)PSB solubilizes …… nutrient from soil

Q.2. Define or Explain the following in few sentences(Any five) **[5 × 1 = 5]**

a) Concentrated manure

b) Soil fertility

c)Straight fertilizer

d) Primary nutrient

e)Nanofertilizer

f)Soil amendment

Q.3. Write TRUE or FALSE against the following statements **[10 × 0.5 = 5]**

a) INMapplication required for soil health.

b) Spectrophotometer is used for N estimation.

c) Manure application is not good for soil.

d) Criteria of essentiality was given by Walkly and Black.

e) A soil is called acidic when its pH is greater than 8.5.

f) N and S requirement of crop is almost equal.

g) Phosphorous fixation is a problem in red soil.

h) Integrated nutrient management is good for sustainable yield.

i) Recommended dose of fertilizer meet the crop need in irrigated condition.

j) Magnesium is a micronutrient.

Q.4. Match the following **[10 × 0.5 = 5]**

Column A		Column B	
I.	Fruit cracking	a.	Chlorophyll
II.	Secondary nutrient	b.	FYM
III.	Straight Fertilizer	c.	Ca
IV.	Free living N fixer	d.	ATP and ADP
V.	Organic C	e.	B
VI.	Available N	f.	Alkali soil
VII.	Phosphorous	g.	Urea
VIII.	Magnesium	h.	Walkly and Black Method
IX.	Gypsum requirement	i.	Azotobacter
X.	Bulky organic manure	j.	Alkaline permanganate

SECTION – B: (DESCRIPTIVE Questions)

(Attempt **ANY FIVE** questions. Each question carries equal marks) **[5 x 6 = 30]**

5) Describe in brief about types of organic manure with examples, one process of manure preparation?

6) What are criteria of essentiality? Classify nutrients with examples. Write four functions of Nitrogen with two deficiency symptoms?

7) Define and classify fertilizers? Write preparation of Urea?

8) What are different components of INM? How to use green manures?

9) What are different processes of nutrients movement in soil? Write the fate of P fertilizers in acid soil?

10) What is the importance of soil fertility evaluation? Write different methods of it?

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