

**M.Sc. Semester-I Examination, 2022
(AGRICULTURE) IN AGRONOMY
PAPER: AGRON 502**

(PRINCIPLES AND PRACTICES OF SOIL FERTILITY AND NUTRIENT MANAGEMENT)

Full Marks: 50

Time: 2 Hours

GROUP-A

1. Answer any FIVE questions from the following:

2 X 5 = 10

- a. Define manures.
- b. Explain fertilizers.
- c. Define bio-fertilizer.
- d. What is composting?
- e. Why do we use Site Specific Nutrient Management?
- f. Explain fertilizer mixture.
- g. Distinguish between soil fertility and productivity.
- h. What are the essential nutrients? Which one the last nutrient?



GROUP-B

2. Answer any FOUR questions from the following:

5 X 4 = 20

- a. What are the advantages use of manure in natural farming?
- b. Write down the factors affecting on FYM quality.
- c. Explain the Bangalore method of composting.
- d. What are the advantages and disadvantages of green manuring. (3+2)
- e. Briefly explain about vermicompost.
- f. Describe the relationship between soil pH and nutrient availability.
- g. Write down the merits and demerits of different types of nitrogenous fertilizer application.
- h. What is enriched composting? How composts are enriched by bio-fertilizer?

GROUP-C

3. Answer any TWO questions from the following:

10 X 2 = 20

- a. Write down the factor's loss of nutrients during storage of FYM and write down the method used for improve of FYM storage. (5+5)
- b. Write down the criteria of essentiality of nutrients? Which nutrient is responsible for greenhouse gas production? Write the deficiency symptoms of N, P, K, Zn and B nutrients? (3+2+5)
- c. What are the agronomic and chemical methods of increasing fertilizer use efficiency? Write two each example of urease inhibitor and nitrification inhibitor. (6+4)
- d. Write short note (any four): (2.5 x 4 = 10)
 - i) Green Leaf manuring, ii) Brown Manuring, iii) LCC, iv) DRIS, v) Nano fertilizer, vi) Rhizobium.