

**M.SC. SEMESTER-I EXAMINATION, 2022
(AGRICULTURE) IN AGRONOMY**

PAPER: AGRON 501

(MODERN CONCEPTS OF CROP PRODUCTION)

Full Marks: 50

Time: 2 Hours

GROUP-A

1. Answer any **FIVE** questions from the following:

2 X 5 = 10

- a. Distinguish between crop logging and crop lodging.
- b. Distinguish between growth and development.
- c. What do you understand by RGR and CGR.
- d. Explain LAI and NAR.
- e. How plant densities influence the crop production?
- f. Differentiate between dry land and rainfed farming.
- g. Differentiate between conventional tillage and conservation tillage.
- h. Write about the concept of balance nutrition.



GROUP-B

2. Answer any **FOUR** questions from the following:

5 X 4 = 20

- a. Advantages of seed treatment in crop production.
- b. How many agro-ecological regions are there?
- c. What are the steps to manage crops to avoid lodging? Discuss five anatomical characters in relation to lodging. (2+3)
- d. Explain zero tillage. Write about the merits and demerits of zero tillage. (1+4)
- e. Explain the mechanisms involved in mitigating drought stresses in plants.
- f. Define organic farming. What are the principles of organic farming? (2+3)
- g. Explain IFS.
- h. Importance of ideotype with reference to yield of crop.

GROUP-C

3. Answer any **TWO** questions from the following:

10 X 2 = 20

- a. Define harvest index. Explain in brief Liebig Law, Blackman's Law, Mitcherlich's Law, Inverse Yield-N Law. (2+2+2+2+2)
- b. Draw and explain Sigmoid Growth Curve. What is plant population and crop geometry? What are the importance of plant population? Explain some factors affecting plant population. (3+3+2+2)
- c. Name each AER in India and classify with growing periods.
- d. Explain the weed management system in zero till and minimum tillage. Mention the difference between modern tillage and conventional tillage. (8+2)
