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M.Sc. Semester-II Examination, 2022

AGRICULTURE (AGRONOMY)

PAPER: AGR 204 (THEO)

(CROPPING SYSTEMS AND SUSTAINABLE AGRICULTURE)

Full Marks: 50

Time: 2 Hours

The figures in the right-hand margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

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

2X5 = 10

- What is agro-ecosystem?
- What do you mean by a) main crop b) component crop?
- Define alley cropping? With example.
- What is non-monetary input? Give examples.
- Mention any two government schemes promoting crop diversification.
- Mention any two important cropping systems of India and their area of prevalence.
- What is a multi-storied cropping system? Give examples.
- What is sustainable agriculture?

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

4X5 = 20

- Discuss the seedbed preparation in sequential cropping system.
- Discuss the competition for solar radiation in an intercropping system.
- Write short note on allelopathy.
- What do you mean by legume effect? Write the advantages of legume crops.
- Discuss the water management in intercropping system.
- What are the plant ideotypes for dryland?
- Mention functions of a) gibberelin b) Ethylene
- What is labile fraction and stable fraction of organic matter?

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

10X2=20

- Write a brief note on a) Discuss arecanut based cropping system & b) Cashew based cropping system. 5+5
- Discuss the role of organic matter in water holding capacity and biological activity. 5+5
- Write short note on crop residue management. How nutrient can be managed sustainably? 5+5
- Write the differences between LEISA and HEIA. How livelihood status related with sustainable agriculture. Mention the principles of sustainable agriculture. 5+2+3
- Discuss the three goals of sustainable agriculture. Write short note on a) multiple cropping index b) Gross return. 6+2+2
