2025

5th Semester Examination

4-Years B.Sc. (Hons.) in Agriculture

Paper : AGS - 507

[Geoinformatics and Nano-technology for Precision Farming]

Full Marks : 50 Time : Two Hours

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

Group - A

Answer any ***five*** questions : 2×5=10

1. What do you mean by precision irrigation?
2. What is Variable Rate Technology (VRT)?
3. What is EMR?
4. What do you mean by missing pixel?
5. What is Soil Test Crop Response?
6. What is the average nutrient use efficiency of conventional type of N, P and K fertilizers?

P.T.O.

7. What is transducer of a Nano-biosensor?

8. What is crop tolerance?

Group - B

Answer any ***four*** questions : 5×4=20

9. Comment on supervised classification.

10. Explain the importance of projection system in coordinate system.

11. Distinguish between attribute data and spatial data.

12. State the different segments of global positioning system.

13. Write down some formulation of Nano-pesticides and Nano-fertilizers according to their intended purpose.

14. What are the major components of Nano-biosensors and mention the role of it in agriculture?

Group - C

Answer any ***two*** questions : 10×2=20

15. Distinguish among conservation agriculture, precision agriculture and smart agriculture practices.

16. Elaborate how Geoinformatics is applied in soil mapping. Discuss the benefits and challenges associated with this technique. 4+6

17. Discuss about different crop simulation models and its application in precision agriculture.

18. Examine various applications of Nano-technology in tillage, seed, water, fertilizer and plant protection. Discuss how these applications contribute to scale up farm productivity. 5+5

35–40
18–20
35–40