



B.E / B.Tech. (Full Time) DEGREE EXAMINATION, APR / MAY 2013
AGRICULTURAL AND IRRIGATION ENGINEERING BRANCH
III-SEMESTER – (REGULATIONS 2008)
AI 9203 – PRINCIPLES OF CROP PRODUCTION

Time : 3 hours.

Max Marks: 100

Answer ALL Questions

Part – A (10 x 2 = 20 Marks)

1. Define the term Agronomy. What are the major crops grown in Tamil Nadu?
2. How are atmospheric gases important for crop growth?
3. Write a note on Universal Soil Loss Equation.
4. Explain the functions of water in plant growth.
5. Differentiate between chemical and bio-fertilizers.
6. What is significance in soil fertility management?
7. What is botanical and family name of red gram?
8. Write about disease management of jute crop.
9. What are the types of horticultural crops?
10. Why is the potato tuber considered to be an underground stem?

Part – B (5 x 16 = 80 Marks)

11. i. Explain in details the various divisions of Horticulture. (5)
 ii. What do you understand by crop adaptation? Discuss in details. (5)
 iii. Describe any 5 factors affecting the crop growth or crop production? (6)
- 12.a.i Explain briefly various physical properties of soil that influence the plant growth. (12)
 ii. A soil sample weighs 150 gm when dry and has a volume of 107 cm. What is the bulk density and porosity of this soil? Assume a particle density of 2.65 gm/cm. (4)

OR

12.b: What is nutrients? Explain briefly 16 important nutrients source and symptoms on the plant growth. (16)

- 13.a.i Write note on: Farmyard manure, Sheep manure, Poultry manure, Green manure, Nitrogen cycle. (10)
 ii. Compare conservation-tillage methods most suitable for areas with soils that tend to be cold and damp in the spring to those that would be warmer and drier. (6)

OR

13.b.i Explain the effects of tillage on crops and soils. Compare the study of different tillage practices. (12)

ii. Describe the purpose of tillage. (4)

14.a. What are the fields crop varieties grown in Tamil Nadu? Describe briefly the origin, planting seasons, weed management and pest management of sugarcane crop. (16)

OR

14.b. What is Red gram? Describe briefly the cropping pattern, seed selection and treatments, weed and pest management of Red crops in Tamil Nadu. (16)

15.a. Explain briefly the generalized cultivation practices of plantation crops (sugarcane) in Southern India. (16)

OR

15.b. Describe briefly about cultivation practices of Mango crops in our state and advantage and disadvantage. (16)