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**B TECH
(SEM I) THEORY EXAMINATION 2014-15
AGRICULTURE FOR ENGINEERS**

TIME: 3 Hours

Total Marks: 100

NOTE: Attempt all questions. In case of numerical problems assume data wherever necessary.

SECTION-A

Q1. Answer the following questions: 10x2=20

- What do you mean by crop rotation?
- What are soil inorganic colloids? Mention their properties?
- What is an acidic soil? Mention the amendments to improve acidic soil?
- Define irrigation. What are its advantages?
- Briefly write the scope of Agronomy?
- What is tillage? Mention the objectives of Secondary tillage?
- What are the improved varieties of any two winter vegetables?
- What are the climatic requirements of Papaya cultivation?
- Write short note on Pruning and training?
- Enumerate the term "Fertigation" in reference to irrigation?

SECTION-B

Q2. Attempt any three questions: 10x3=30

- Classify the methods of irrigation. Explain the sprinkler irrigation in details?
- Discuss the status and scope of horticultural crops in Uttar Pradesh?
- What are the effect of weather parameters on crop growth and development?
- What are the roles played by organic matter in the soil? What are the factors responsible for organic matter content in the soil?
- What are the important soil physical properties and good quality water is necessary for production?

SECTION-C

Q3. Attempt all parts of the following: 10x5=50

- What is cropping system? Discuss the rely cropping and mixed cropping in details by giving examples?

OR

Describe the soil-water-plant relationship with the help of diagrammatic representation in detail?

- Define the Saline and sodic soils. What are the causes of its development? Why leaching of salts are necessary for its reclamation?

OR

What are the essential plant nutrients and their functions? Mention the deficiency symptoms in the plants?

- Explain the soil classification and their composition. What are the factors responsible for organic matter content in each type of soil?

OR

Discuss the soil forming processes and minerals availability in each type of formations?

- d. Discuss, how nursery could be propagated round the year in erratic weather conditions of Uttar Pradesh?

OR

Write short note on the following:

- (i) Rainfed farming.
- (ii) Mulching.
- (iii) Plant growing structures.
- (iv) Soil texture and soil structure.

- e. Discuss the sorting, grading and packaging technology of Grape fruits?