

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**B.E (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2014**

**AGRICULTURAL AND IRRIGATION ENGINEERING**

**SECOND SEMESTER**

**AI 8201 PRINCIPLES OF AGRICULTURAL AND IRRIGATION ENGINEERING**

(Regulation R2012)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

**PART-A (10 x 2 = 20 Marks)**

1. Define Soil.
2. What does an Order of a stream implies?
3. What is a Participatory Management of Irrigation system?
4. How a stanchion Barn is different from free stall barn?
5. Name any four types of Tractor used in Agricultural operations.
6. How Primary Tillage is different from secondary Tillage?
7. What is the need for Post-Harvest of Crops in Agriculture?
8. Name any four fermented products from Milk.
9. What are the disadvantages of Solar energy?
10. What is the need for biomass energy sources in Agriculture?

**Part – B (5 x 16 = 80 marks)**

11.
  - i) How to classify the Soil based on its Irrigability? (5)
  - ii) Name some of the factors that affect Watershed management.(5)
  - iii) What are the control measures for soil erosion? (6)
12.
  - a)
    - i) Explain briefly the different types of surface source used for irrigation.(8)
    - ii) With a neat sketch explain the parts of a canal network. (8)
  - (OR)**
  - b)
    - i) Explain briefly the different types of hog housing. (8)
    - ii) Explain briefly the different types of Controlled Environment Agriculture. (8)
13.
  - a)
    - i) Explain briefly about different Primary Tillage implements. (8)
    - ii) Explain the different types of Power Tiller and the factors that favour the use of Power Tiller.(8)
  - (OR)**
  - b)
    - i) Explain briefly the different types of seed metering mechanisms. (8)
    - ii) Explain briefly the different types of Hydraulic Sprayers used for Pesticide Application. (8)

Roll No.

--	--	--	--	--	--	--	--	--	--	--

14. a) Explain briefly all the operations in Unit Operations of Food processing. (16)  
(OR)  
b) i) Explain briefly the requirements of Packaging and types of Packaging based on the market. (8)  
ii) Explain briefly the different types of processes for Milk Processing. (8)
15. a) Explain briefly the importance of biomass, classification and principles of energy production from Biomass. (16)  
(OR)  
b) Explain the types of solar energy collectors and some of the useful appliances that replace the conventional appliances. (16)