

Cat. No: Agro.1203

Marks: 80

Title: Irrigation and Water management (2+1)

Time: 3 hours

**I. Fill in the blanks:**

(10 x 1=10)

1. The fraction of total rainfall useful for meeting the crop water requirement is called \_\_\_\_\_.
2. Irrigation water with S A R more than \_\_\_\_\_ is not suitable for irrigation.
3. When transpiration exceeds the rate of water absorption the stress is called \_\_\_\_\_.
4. The method of runoff, collection, storage and recycling is known as \_\_\_\_\_.
5. \_\_\_\_\_ as agrostological measure raising of grasses across the slope and along contour to conserve the soil moisture.
6. The soil moisture content at \_\_\_\_\_ is referred to as permanent wilting point.
7. Initial state of soil erosion \_\_\_\_\_.

**State True or False:**

8. Selection of crops and cropping system is mainly depend on rainfall as well as soil character.
9. ET is practically considered as equal to consumptive use.
10. Salt content of irrigation water is measured as Electrical conductivity.

**II Write short notes on any TEN**

(10 x 3=30)

1. Consumptive use and conjunctive use.
2. Agroforestry Vs alley cropping.
3. Dry farming/dry land farming/ rainfed farming.
4. Tensiometer vs neutron probe.
5. Reference evapotranspiration vs crop co-efficient.
6. Irrigation requirement vs water requirement.
7. How to calculate the expected soil loss.
8. Percolation, infiltration and seepage.
9. Explain various agro techniques for efficient management of rainfed crops.
10. Contour cultivation vs contour bunding.
11. Write different losses due to soil erosion.
12. Explain various alternative landuse systems for rainfed lands.

**III Explain any SIX of the following**

(6 x 5=30)

1. Define drainage and briefly discuss types of drainage.
2. Explain soil moisture constraints and their importance in irrigation.
3. Watershed management is holistic approach in the development of rainfed areas-Discuss in detail.
4. What is meant by alternate land use system? Where it is suggested? why? Explain various systems in detail.
5. Briefly explain about land capability classification.
6. Briefly discuss on different approaches for scheduling irrigation.
7. Factors affecting available soil moisture.
8. What is meant by soil erosion, types and different forms?

**IV Write essay on ANY ONE**

(1 x 10=10)

1. Briefly describe on different types of erosion and factors affecting soil erosion and describe the various soil conservation measures to improve the farming practices.
2. Describe different agro techniques for efficient management of rainfed crops.