



KERALA AGRICULTURAL UNIVERSITY
B. Tech. (Agrl. Engg.) 2022 & Previous Admissions
IV Semester Final Examination – July 2024

Lwre.2206

Soil and Water Conservation Engineering (2+1)

Marks: 50
Time: 2 hours

- I Fill in the blanks** (10x1=10)
1. The potential ability of rain to cause the erosion is called.....
 2. The process of saltation is responsible for % of soil erosion.
 3. The land slope for agronomical measures should be
 4. The equation (USLE) is presented as $A=.....$
 5. The main purpose of bench terraces isto reduce the land slope.
 6. is minimum velocity required to move soil particles.
 7.permanent vegetative measure which helps in the reduction of wind erosion.
 8. The contour bunds are recommended for areas with rainfall ofmm.
 9. The stage of gully, where Vegetation starts growing in the gully is
 10. Recurrence interval considered for brushwood dams is
- II Write short notes on ANY FIVE of the following** (5x2=10)
1. Geologic erosion
 2. PGCS
 3. Bench terracing
 4. Agents of soil erosion
 5. Contour bunds
 6. shelterbelt
 7. Rainfall erosion index
- III Answer ANY FIVE of the following** (5x4=20)
1. Explain in details the Factors Affecting Soil Erosion.
 2. Brief the EI_{30} Index Method of Estimation of Erosivity from Rainfall Data.
 3. Describe Different Parameters of USLE.
 4. Write Components of Chute Spillway with diagram.
 5. On a 20% hill slope, it is proposed to constructed bench terraces. If the vertical interval of terrace is 2 m, calculate
 - (i) length of terrace per hectare
 - (ii) earth work required per hectare and
 - (iii) area lost per hectare both for vertical cut and batter slope of 1:1The cut should be equal to fill.
 6. Write in detail the Classification of Gullies based on shape.
 7. List Temporary Gully Control Structures (TGCS) and explain any one off them.
- IV Write an essay on ANY ONE of the following** (1x10=10)
1. Write in detail the Land Use capability classification.
 2. Explain Design Specification of contour Bunds.
