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Question Paper Code: U4A03

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2023

Fourth semester

Agriculture Engineering

21UAG403-SOIL AND WATER CONSERVATION ENGINEERING

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

PART A - (10 x 1 = 10 Marks)

1. _____ Waterway is the best waterway. CO1 -U
(a) Natural (b) Concrete (c) Erased (d) none of the above
2. The removal of soil, from small but well defined channel or streamlets CO1 -U
when there
(a) hill erosion (b) rill erosion (c) stream erosion (d) soil erosion
3. USLE computes _____ CO1 -U
(a) sheet erosion (b) rill erosion (c) gully erosion (d) both (a) & (b)
4. In equation $Q = CIA / 360$, I is in _____ CO1 -U
(a) mm/ hr (b)cm/ hr (c)cm/ sec (d) mm/ min
5. ----- terraces are developed gradually over years by natural levelling CO1 -U
(a) Broad based (b) Bench (c) Puertorican type (d) Narrow based
6. The cross sectional area of graded bund should not be less than CO1 -U
(a) 1m^2 (b) 2.25m^2 (c) 5m^2 (d) 4m^2
7. The 'half-moon' structure is used for CO1 U
(a) sheet water harvesting (b) runoff harvesting
(c) spring water harvesting (d) water spreading
8. The 'contour stone bunds' are used for CO1 -U
(a) sheet water harvesting (b) rill flow harvesting
(c) runoff harvesting (d) water spreading

9. The reservoir sedimentation does not get affected due to _____ CO1- U
 (a) watershed land use (b) wind direction
 (c) rainfall pattern (d) watershed topography

10. Flooding and Leaching in Practiced as a Reclamation method in CO1 -U
 which soil
 (a) acidic (b) saline (c) alkaline (d) all the above

PART – B (5 x 2= 10Marks)

11. Types Wind erosion control vegetative measures? CO1- U
 12. Enumerate the characteristics of Precipitation? CO1- U
 13. List out the Mechanical measures of water erosion control? CO1 -U
 14. List out the Components of Rain Water harvesting? CO1 -U
 15. List out the sources of Sedimentation? CO1- U

PART – C (5 x 16= 80Marks)

16. (a) Briefly explain Temporary gully control structures? CO1- U (16)
 Or
 (b) Brief about the check dam and its classification with durability CO1 -U (16)
 check.
17. (a) Detail the construction procedure for grassed waterway and List CO1 -U (16)
 out the steps involved in maintenance.
 Or
 (b) Elaborate about USLE equation with its factors. CO1- U (16)
18. (a) Briefly explain Mechanical Measures for Water Erosion Control. CO1-U (16)
 Or
 (b) Briefly explain Grassed waterways Construction Procedure and CO1-U (16)
 Purpose.
19. (a) Describe the design details for pond construction. CO2- App (16)
 Or
 (b) Demonstrate various water harvesting techniques. CO2- App (16)
20. (a) Briefly explain Distribution and Estimation of Reservoir CO1- U (16)
 Sedimentation?
 Or
 (b) Briefly explain methods Reservoir Sedimentation Control. CO1 -U (16)