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Question Paper Code: U4A03

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2024

Fourth semester

Agricultural Engineering

21UAG403-SOIL AND WATER CONSERVATION ENGINEERING

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10 x 1 = 10 Marks)

- _____ is also known as inter cropping or co-cultivation. CO1- U
(a) Mulching (b) Mixed Cropping (c) Terracing (d) Crop Rotation.
- _____ mass of soil that can be removed with a unit force and expressed as tons per Joule. CO1- U
(a) Erodibility (b) Erosivity (c) Erosion (d) Non-Erosivity
- Erodability is the characters of _____. CO1-U
(a) Rainfall (b) Soil
(c) Rainfall and Soil (d) Soil and Water
- The removal of soil particles by direct impact of wind over soil clods is called as _____. CO1- U
(a) Saltation (b) Suspension (c) Efflusion (d) detrusion
- The graded contour bunds are not recommended for construction on slope CO1-U
(a) 2% (b) 5% (c) 8% (d) 10%
- The function of shoulder bund is to _____. CO1- U
(a) Grassed Water Ways (b) Temporary Gully Control Structures
(c) Terraces (d) Gabions

7. Area contributing surface runoff to a single outlet is called _____ CO1- U
 (a) Command Area (b) Water Spread Area
 (c) Watershed Area (d) Catchment Area
8. Which of the following is the in-situ rainwater harvesting method CO1- U
 (a) Conservation Tillage (b) Conventional Tillage
 (c) Conservation Farm (d) All the Above
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. The soil type affects the sediment yield from the catchment by affecting the CO1- U
 (a) Soil Erosion (b) Time of Concentration
 (c) Overland Flow/ Runoff (d) Both (a) And (c)

PART – B (5 x 2= 10 Marks)

11. List out the different forms of Water Erosion. CO1-U
12. Explain, direct runoff and base flow. CO1-U
13. Define Contour Cropping. CO1-U
14. Explain important of Rain Water harvesting in future. CO1-U
15. List the factors Affecting Sedimentation of Water Resources. CO1-U

PART – C (5 x 16= 80 Marks)

16. (a) Describe the Methods and Techniques of Soil Conservation? CO1-U (16)
 Or
 (b) Brief about the check dam and its classification with durability CO1-U (16)
 check.
17. (a) Briefly explain Components of Runoff and Precipitation CO1-U (16)
 Characteristics.
 Or
 (b) Enlist and explain various types of bunds used in soil CO1- U (16)
 conservation practice

18. (a) Briefly explain Grassed waterways Construction Procedure and Purpose. CO1-U (16)
- Or
- (b) Describe various shapes of grassed water ways, why parabolic shape is considered most suitable section of grassed water ways and explain factors affecting shapes of grassed water ways. CO1-U (16)
19. (a) Briefly explain Groundwater Harvesting and Water Harvesting Technique? CO1-U (16)
- Or
- (b) Explain design procedure of farm pond CO1-U (16)
20. (a) Briefly explain Distribution and Estimation of Reservoir Sedimentation. CO1-U (16)
- Or
- (b) Explain pre and post sedimentation control methods CO1-U (16)

