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Question Paper Code: 99A03

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

Elective

Agricultural Engineering

19UAG903 - Watershed Planning and Management

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Dimension of relief is CO1- U
(a) L^{-1} (b) L (c) L^{-2} (d) L^{-2}
2. The shape of falling limb is CO1- U
(a) Convex (b) concave (c) both (a) & (b) (d) none of the above
3. A high value of bifurcation ratio is found in the _____ CO1- U
(a) flat land watershed (b) hilly watershed (c) both (a) & (b) (d) none of the above
4. A hydrograph is the plot of CO2- App
(a) discharge rate and time (b) rainfall and time
(c) rainfall volume and time (d) none of the above
5. Size of gully depends on _____ CO1- U
(a) catchment area (b) runoff rate (c) soil type (d) all the above
6. Inactive gullies are CO1- U
(a) stabilized gullies (b) eroded gullies (c) without flow (d) all the above
7. The drainage divide may be the CO1- U
(a) valley (b) ridge (c) forest land (d) both (a) and (b)
8. The kind of spillway used in farm pond as mechanical spillway, is CO1- U
(a) drop structure (b) chute spillway (c) drop inlet spillway (d) all the above

9. The watershed is synonymous to CO2- U
 (a) drainage basin (b) drainage area (c) catchment (d) all the above
10. In India, total number of soil conservation regions is CO3 -U
 (a) 10 (b) 7 (c) 5 (d) 8

PART – B (5 x 2= 10Marks)

11. Explain the land capability sub-classes? CO1- U
12. List out the stages of watershed program evaluation? CO2- App
13. Explain classification of watershed? CO1- U
14. Explain water conservation practices ridges and furrows? CO1- U
15. Write various objectives for watershed development? CO1- U

PART – C (5 x 16= 80Marks)

16. (a) In detail explain about the process of watershed planning. CO2- App (16)
 Or
 (b) Briefly explain principles and action plan for watershed management and development. CO1- U (16)
17. (a) Briefly explain Environmental, community and financial benefits of watershed planning. CO2 -U (16)
 Or
 (b) In detail explain about indicators of watershed program evaluation. CO2 -App (16)
18. (a) How will you design water conservation practices in irrigated lands? Give suitable illustrations. CO3- App (16)
 Or
 (b) In detail explain about the temporary gully control structures (TGCS) with neat sketches. CO1 -U (16)
19. (a) Briefly explain about soil conservation practices? Give suitable illustrations. CO2- App (16)
 Or
 (b) In detail explain about design and components of Farm pond. CO3 -App (16)
20. (a) Briefly explain about Watershed modeling? Give suitable flowchart. CO3 -App (16)
 Or
 (b) In detail explain about river valley project. CO2- App (16)

