A **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 99A03

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2022

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 limbis CO1- U

   (a) Convex (b)concave (c) both (a) & (b) (d) none of the above

3. A high value of bifurcation ratio is found inthe_____ 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)