Reg. No. : | | | | | | | | | | | | |

Question Paper Code: 1084143

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV / DEC 2024
Fourth Semester
Agricultural Engineering
U20AG404 – HYDROLOGY AND WATER RESOURCES ENGINEERING
(Regulation 2020)

Time: Three Hours Maximum: 100 Marks

Answer ALL questions

PART – A (10 x 2 = 20 Marks)

1. What are the objectives of the hydrological study?

2. Enlist the various forms of precipitation.

3. Define hydrgraph.

4. What are all the advantages of instantaneous unit hydrograph over direct unit hydrograph?

5. State any two formulae to calculate flood discharge?

6. Define flood forecast.

7. Differentiate between single and multipurpose reservoir.

8. What are all the geological explorations for reservoir sites?

9. Define Transmissivity.

10. Enlist the formations that serve as good aquifers?

PART – B (5 x 16 = 80 Marks)

11. (a) What do you mean by Hydrologic cycle? Explain its components with a neat sketch. (16)

(OR)

(b) Explain in detail about various types of precipitation. (16)

12. (a) Briefly discuss about various factors affecting the surface runoff. (16)

(OR)

(b) Explain the following terms with a neat sketch. (16)
(i) Effective Duration
(ii) Basin Lag
(iii) Recession time
(iv) Time of concentration

13. (a) Write detailed note on the mass curve method to estimate the storage capacity of reservoir. (16)

(OR)

(b) Discuss the process of soil erosion and its causes. (16)

14. (a) Illustrate about different types of structural and non-structural methods of flood control measures. (16)

(OR)

(b) Describe the IMD method of assessment of drought. (16)

15. (a) Explain about different types of aquifers with neat sketches. (16)

(OR)

(b) What are the methods of rainwater harvesting systems? Explain in detail about roof top rain water harvesting system with neat sketch. (16)

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