05/01/2024 - FN

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

Question Paper Code : 70359

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2023.

Sixth Semester

Civil Engineering

CE 8603 — IRRIGATION ENGINEERING

(Regulations 2017)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List any two merits of irrigation.
2. Give the relationship between duty, delta, and base period of crop.
3. List the types of irrigation methods.
4. Give the difference between ridge and furrow irrigation.
5. Define weir.
6. What is meant by diversion head works?
7. Differentiate between lined and unlined canal.
8. Define canal regulator.
9. What are the necessary steps carried out for minimizing the water losses?
10. Define rehabilitation in water management.

PART B — (5 × 13 = 65 marks)

11. (a) Describe in detail about the planning and development of irrigation projects.

Or

(b) Discuss about the estimation of evapotranspiration using experimental and theoretical methods.

12. (a) Discuss the difference between sprinkler and drip irrigations with a neat sketch.

Or

(b) Describe the following :

(i) Irrigation scheduling (6)

(ii) Irrigation efficiencies. (7)

13. (a) Describe in detail the following :

(i) Forces acting on gravity dam. (6)

(ii) Causes for failure of gravity dam. (7)

Or

(b) Discuss in detail about the various types of impounding structures.

14. (a) Elaborate in detail about the cross drainage works with the diagram.

Or

(b) Differentiate between the Kennedy's and Lacey's Regime theory.

15. (a) Explain in detail about the modernization techniques used for water management in irrigation.

Or

(b) Elaborate in detail about the changing paradigms in water management.

PART C — (1 × 15 = 15 marks)

16. (a) Explain with the neat sketch about the various types of canals drop and its functions.

Or

(b) Explain the steps carried out to design the prismatic canal with the neat sketch.

———————