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**Question Paper Code : 70304**

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2021.

Seventh Semester

Civil Engineering

CE 6703 — WATER RESOURCES AND IRRIGATION ENGINEERING

(Regulations 2013)

(Common to : PTCE 6703 – Water Resources and Irrigation Engineering for  
B.E. (Part-Time) – Civil Engineering – Sixth Semester (Regulations – 2014)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is meant by duty and Delta?
2. What is multipurpose reservoir?
3. Define consumptive use of surface water.
4. What do you mean by Conjunctive use of water?
5. What is transpiration ratio?
6. What is crop rotation?
7. What are the advantages of lined canals?
8. What are the drawbacks in Kennedy's Theory?
9. Name some pumps which are used to lift water from confined aquifer.
10. Enumerate the purpose of irrigation scheduling.

PART B — (5 × 13 = 65 marks)

11. (a) Briefly state the various steps needed for planning an irrigation project. List the various objectives of water resources development in the context of the lesser developed countries.

Or

- (b) What is a multipurpose project? What are the functional requirements in multipurpose projects? How to estimate requirement of water for irrigation purpose?

12. (a) Discuss in detail the salient features and the principles of National Water Policy.

Or

- (b) What is mater plan? Explain the aim and eight work plans of master plan.
13. (a) What is meant by transpiration by plants? Do you consider it an evil as it causes water loss from the soil and plants? What does transpiration coefficient mean?

Or

- (b) Suggest a method for estimating the consumptive use of crops over a large area. Classify the consumption use of water by crop based on its estimation during specific periods.
14. (a) Briefly describe and discuss the various methods of lining canals. Give a cross section of lined canals.

Or

- (b) What are the purpose of cross drainage work? What are the various types of cross drainage works? Describe the use of siphon in cross drainage work.
15. (a) Explain briefly about Lift irrigation and Tank irrigation.

Or

- (b) Explain in detail about Subsurface Irrigation method and the favourable conditions.

PART C — (1 × 15 = 15 marks)

16. (a) Explain in detail the role, significance and usefulness of Participatory Irrigation Management under the present day context with a case study.

Or

- (b) Discuss about the component parts of a Diversion headwork also give the reasons and remedial measures for its failure.