

Roll No.

								9
--	--	--	--	--	--	--	--	---

B.E / B. Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2012

Agriculture and Irrigation Engineering

Semester VI

CE 9036 Integrated Water Resources Management

(Regulation - 2008)

Time : 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What are the key elements in IWRM process?
2. Define "food security"
3. What is drainage network?
4. List different beneficial uses of water
5. Define "watershed"
6. Differentiate land cover and land use
7. What are wetlands?
8. What is 'Fee' and 'Tax'?
9. What do you understand by "Eco restoration"?
10. What is PPP?

Part – B (5 x 16 = 80 marks)

11. What are the challenges faced by water resources today that demand integrated approaches? Discuss enabling environmental conditions required for implementation of IWRM
12. a) Write an essay on the concept of water as an economic good and discuss economic instruments available for water management
OR
b) Discuss valuation concept in water resources and elaborate how economic instruments can help in environmental management.
13. a) What are watershed characteristics? Explain the basic parameters, their role and their importance in basin morphology
OR
b) What are check dams and How do we classify check dams? Explain equation used for intensity-duration-return period relationship
14. a) Discuss water conservation methods in watersheds and various types of water harvesting structures available for use
OR
b) What are the impacts of developmental process in watersheds and how can we assess them? How do they affect the run off characteristics and water quality

15. a) Locate PPP in IWRM triangle and their different forms. Discuss the role of institutions in private sector participation in water sector development and management

OR

- b) Discuss the concept of Blue – Green – Grey water in the hydrological cycle. Explain with the help of a case study, the role of agricultural use of water in IWRM context in a watershed