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B.E./B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2013

AGRICULTURAL & IRRIGATION ENGINEERING

SIXTH SEMESTER

**CE 9036 – INTEGRATED WATER RESOURCES MANAGEMENT**

(REGULATION 2008)

Time : 3 hr

Max Mark : 100

Instructions: 1. In part - B question no. 11 is compulsory.

Answer All Questions

Part – A (10x2=20 Marks)

1. What is mean by river basin management?
2. Explain briefly the need of IWRM in the light of developing nations.
3. What is meant by water security in developing nations?.
4. What is meant by food and health security?
5. Write a short note on equity and equality in water management.
6. How do you explain watershed topology in a river basin?
7. What is a watershed? Can a river basin called as a watershed?
8. Draw drainage density and give one example.
9. Explain links IWRM has with PPP and participatory approaches.
10. Explain the 'political will'

Part – B (5x16=80 Marks)

11. i. a . Discuss the relevance of IWRM to the developing world 8  
b. Explain the importance of socio economic and political benefits of IWRM 8
12. a. Examine the need for the understanding water pricing in the context of development. 8  
b. Elaborate the importance of PPP on the inclusive development. 8  
or  
c. Elucidate how food security perceived as a complex sustainable development issue. 8  
d. Illustrate your understanding of the river basins and analyse the sectoral water supply and demand in the third world countries. 8
13. a. Examine with example the man made and natural causes of changes in the river morphology

- with special reference to its land use changes. 16
- or
- b. Describe the cases explaining the impact of changes in the river basin on ecosystem, environment and human well being. 16
14. a. Examine the stream networks and explain the effects of community interventions on streams. 10
- b. Explain the cases of institutional interventions in securing the riparian rights within river basins. 6
- or
- c. Explain the eco system approaches followed in any two river basins to protect the riparian rights of countries involved in trans-boundaries water issues. 16
15. a. Explain a case study of your choice that could explain the importance of IWRM, 10
- b. What is meant by Building from below in IWRM. 6
- or
- c. Explain any the issues we find around the globe in water that warrants a paradigm shift using IWRM. 16