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ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)**B.E. /B.Tech / B. Arch (Full Time) - END SEMESTER EXAMINATIONS, APR / MAY 2025****COMMON TO INFORMATION TECHNOLOGY, MECHANICAL ENGINEERING & B.PLAN**

Semester -6

AI 5691 & BASICS OF INTEGRATED WATER RESOURCES MANAGEMENT

(Regulation 2019)

Time:3hrs

Max.Marks: 100

CO1	Describe the context and principles of IWRM, compare the conventional and integrated ways of water management.
CO2	Discuss on the different water users, how it has impacted and ways to tackle these impacts.
CO3	Explain the economic aspects of water and choose the best economic option among the alternatives, illustrate the pros and cons of PPPs through case studies.
CO4	Illustrate the recent trends in water management.
CO5	Understand the implementation hitches and the institutional frameworks.

BL – Bloom's Taxonomy Levels

(L1-Remembering, L2-Understanding, L3-Applying, L4-Analysing, L5-Evaluating, L6-Creating)

PART- A(10x2=20Marks)
(Answer all Questions)

Q.No.	Questions	Marks	CO	BL
1	Write any two primary objectives of IWRM.	2	1	1
2	What is paradigm shift in water resources management?	2	1	1
3	Write a short note on ecosystem services.	2	2	2
4	What is meant by water security?	2	2	1
5	Is water an economic good? Briefly explain.	2	3	2
6	What is ecosystem regeneration?	2	3	1
7	Briefly write the definition of watershed.	2	4	1
8	What is sustainable livelihood?	2	4	1
9	Give a snap short report on bureaucratic reform and inclusive development.	2	5	2
10	Write a short note on reforms in water management.	2	5	1

PART- B(5x 13=65Marks)
(Restrict to a maximum of 2 subdivisions)

Q.No.	Questions	Marks	CO	BL
11 (a)	Analyse the facts about water and the key challenges in water management.	13	1	3
OR				
11 (b)	Examine SDG goals in the light of water health and sanitation.	13	1	3
12 (a)	Evaluate the need of inclusive and bottom up approach in water resources management.	13	2	4
OR				
12 (b)	Describe securing water for different uses with reference to people, food production, ecosystem and others.	13	2	4
13 (a)	Examine the role of public private partnership in integrated water management	13	3	4
OR				

13 (b)	Analyse leadership imperatives and governance in water management.	13	3	3
14 (a)	Examine river basin management and the need of reforms in water resources management.	13	4	3
OR				
14 (b)	Evaluate the barriers in the implementation of IWRM with the current underlying threats and challenges.	13	4	4
15 (a)	Examine the importance of institutional transformation in water management.	13	5	4
OR				
15.(b)	Analyse the need of capacity building in the process of empowerment in water resources management.	13	5	4

PART- C(1x 15=15Marks)
(Q.No.16 is compulsory)

Q.No.	Questions	Marks	CO	BL
16.	Critically evaluate a case study of your choice to explain the recent trends of IWRM In India.	15	5	5

