CBCS SCHEME

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BCV654A

Sixth Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026
Water Conservation and Rainwater Harvesting

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Discuss the consequences of reduced surface water flow on aquatic ecosystems and biodiversity.	10	L2	CO1
	b.	Explain the key factors contributing to the uneven distribution of water resources in Karnataka?	10	L2	CO1
		OR			
Q.2	a.	Explain about the key indicators used to identify the withdrawal of monsoon rains.	10	L2	CO1
	b.	Discuss about hydrological cycle and influence of human activity on water cycles.	10	L2	CO1
		Module – 2			
Q.3	a.	Illustrate the different methods of water harvesting methods.	10	L2	CO2
	b.	Explain the different classes of rainwater harvesting techniques.	10	L2	CO2
		OR			
Q.4	a.	Explain the feasibility of implementing of roof top rain water harvesting in rural areas.	10	L2	CO2
	b.	Discuss the major sources of water pollution in rural and urban areas.	10	L2	CO2
		Module – 3			
Q.5	a.	Explain the procedure to determine the size and capacity of storage tanks for rainwater harvesting.	10	L2	CO2
	b.	Discuss about factors affecting ground water recharge.	10	L2	CO2
		OR			
Q.6	a.	A community building with a roof area of 300 m^2 receives an average annual rainfall of 600 mm. The runoff co-efficient is 0.9. Calculate the total annual rainwater harvested.	10	L3	CO2
	b.	Explain the traditional technique for water harvesting.	10	L2	CO2

		Module – 4			
Q.7	**a.**	What are the major sources of water pollution and how can they be controlled to ensure clean water for consumption?	**10**	**L2**	**CO3**
	b.	Explain the benefits of water reuse in households, agriculture and industries.	**10**	**L2**	**CO3**
		OR			
Q.8	**a.**	Discuss effective measures to limit water consumption in residential, agricultural and industrial sectors.	**10**	**L2**	**CO3**
	b.	Explain the role of water conservation in reducing the energy foot print of water treatment and distribution.	**10**	**L2**	**CO3**
		Module – 5			
Q.9	**a.**	Explain how the grey water foot print relates to waste water management and industrial discharge practices.	**10**	**L2**	**CO4**
	b.	Describe the role of sustainability assessments in achieving global water sustainability.	**10**	**L3**	**CO4**
		OR			
Q.10	**a.**	Discuss the significance of geophysical methods to help in locating groundwater aquifers and assessing water availability.	**10**	**L3**	**CO4**
	b.	Explain the sustainability assessments guide policy development and water management strategies.	**10**	**L2**	**CO4**

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