

Code: 19CE4702D

IV B.Tech - I Semester – Regular Examinations - DECEMBER 2022

**WATERSHED MANAGEMENT
(CIVIL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

- Note: 1. This question paper contains two Parts A and B.
 2. Part-A contains 5 short answer questions. Each Question carries 2 Marks.
 3. Part-B contains 5 essay questions with an internal choice from each unit. Each question carries 12 marks.
 4. All parts of Question paper must be answered in one place.

BL – Blooms Level

CO – Course Outcome

PART – A

		BL	CO
1. a)	What is the function of a watershed?	L2	CO1
1. b)	What is meant by sheet erosion?	L2	CO2
1. c)	Define percolation tanks and recharge wells.	L1	CO3
1. d)	What is the difference between aquifer and groundwater recharge?	L2	CO4
1. e)	How is biomass management useful for ecosystem management?	L2	CO5

PART – B

			BL	CO	Max. Marks
UNIT-I					
2	a)	Explain physiographic characteristics of Watershed with neat sketches wherever necessary.	L2	CO1	6 M

	b)	Describe watershed deterioration and its consequences.	L2	CO1	6 M
OR					
3		Explain the necessity of Watershed Management in India. List out the Principles of Watershed Management in detail.	L2	CO1	12 M
UNIT-II					
4	a)	Explain types of erosion in detail along with causes.	L2	CO2	6 M
	b)	Explain Universal soil loss equation in detail.	L2	CO2	6 M
OR					
5	a)	Explain in detail the Contour techniques to control Erosion.	L3	CO2	6 M
	b)	List out measures to arrest soil erosion in a watershed. Discuss each measure in detail.	L3	CO2	6 M
UNIT-III					
6		What are the objectives of rain water harvesting and explain about the methods of rain water harvesting.	L2	CO3	12 M
OR					
7		Explain water harvesting with respect to check dam, farm ponds and percolation tanks in detail.	L2	CO3	12 M
OR					

UNIT-IV					
8	a)	Explain in detail the methods used for artificial recharge.	L2	CO4	7 M
	b)	Briefly explain about measures taken for Reclamation of saline and alkaline soils.	L2	CO4	5 M
OR					
9	a)	Briefly explain the artificial recharge techniques for groundwater in detail.	L2	CO4	8 M
	b)	List out the advantages and disadvantages of artificial recharge.	L2	CO4	4 M
UNIT-V					
10	a)	Discuss about the role of ecosystem and bio-mass management.	L2	CO5	6 M
	b)	What are the objectives of horticulture and Silvi pasture system? Explain.	L2	CO5	6 M
OR					
11	a)	Explain in detail about the inter, mixed and strip cropping.	L2	CO5	6 M
	b)	Give a brief explanation on social forestry and afforestation.	L2	CO5	6 M