

P P SAVANI UNIVERSITY

6th Semester of B. Tech. Examination
November 2022

SECV3082 Irrigation and Hydraulics Structures

26.11.2022, Saturday

Time: 01:00 p.m. To 03:30 p.m.

Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.

SECTION - I

Q - 1	Define (Any Five)	[05]	CO	BTL
(i)	Define irrigation	1	1	2
(ii)	Define lift irrigation	1	1	2
(iii)	Define sodium Adsorption ratio (SAR)	2	1	1
(iv)	Define Gross command area	2	2	2
(v)	Define Field capacity	2	2	2
(vi)	Define rockfill dam	1	1	2
(vii)	What is barrage?	1	1	2
Q - 2	What is meant by surface and subsurface irrigation and what are their types?	[05]	1	4
(a)				
Q - 2	What is meant by Furrow irrigation and Sprinkler irrigation? Which one is preferred in India?	[05]	3	4
(b)				
	OR			
Q - 2	Explain the different stages of a river.	[05]		4
(a)				
Q - 2	Explain various parts of a weir and their functions	[05]	4	2
(b)				
Q - 3	What are earthen dams and under what circumstances they are preferred?	[05]	4	3
(a)				
Q - 3	What are the types of earthen dams? Draw neat sketches showing each type.	[05]	5	3
(b)				
	OR			
Q - 3	What are different kind of spillways and how are they selected for individual conditions?	[05]	5	3
(a)				
Q - 3	What is meant by spillways? What is its necessity in dam construction?	[05]	5	4
(b)				
Q - 4	Attempt any one.	[05]		
(i)	What is meant by Delta and Duty of Canal water. Derive a relationship between Duty and Delta for a given base period.		3	5
(ii)	Explain the influence of several factors on which duty depends.		3	5

SECTION - II

Q - 1	Define (Any Five)	[05]		
(i)	Define contour canals.		1	2
(ii)	Define watershed canals.		1	2
(iii)	Define evaporation.		1	2
(iv)	Define time factor.		2	2
(v)	Define capacity factor.		2	2
(vi)	Define Nominal duty.		2	2
(vii)	Define intensity of irrigation.		2	2
Q - 2	Explain losses of water in canals.	[05]	6	3
(a)				
Q - 2	Explain types of canals.	[05]	4	2
(b)				
OR				
Q - 2	Write a short note on Head regulator and Cross regulator	[05]	4	3
(a)				
Q - 2	What is irrigation outlet? List out the types of irrigation outlet.	[05]	4	1
(b)				
Q - 3	Explain various types of cross drainage works	[05]	3	3
(a)				
Q - 3	Write a short note on Silt ejector.	[05]	3	3
(b)				
OR				
Q - 3	What is water logging? Explain its causes.	[05]	6	4
(a)				
Q - 3	What are the remedial measures for prevention of water logging?	[05]	6	3
(b)				
Q - 4	Attempt any one .	[05]		
(i)	Explain silting and scouring of canal.		3	2
(ii)	Differentiate between lined canals and unlined canals		3	2

CO : Course Outcome Number BTL : Blooms Taxonomy Level

Level of Bloom's Revised Taxonomy in Assessment

1: Remember	2: Understand	3: Apply
4: Analyze	5: Evaluate	6: Create