

Total No. of Questions – 04

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P118-123 (T1)

G.R. No.

OCTOBER 2018 / IN - SEM (T1)

F. Y. M. TECH. (WREE) (SEMESTER -I)

COURSE NAME: Water Resource System Planning

COURSE CODE: CVPA11183A (ELECTIVE I)

(PATTERN 2018)

Time: [1 Hour]

[Max. Marks: 20]

(*) Instructions to candidates:

- 1) Answer Q.1 OR Q.2, Q.3 OR Q.4
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed
- 4) Use suitable data where ever required

Q.1	a)	State various aspects of water resource planning and development. Explain in detail with suitable examples. What is effect of spatial and temporal characteristics of water resources on agricultural growth of Maharashtra?	6
	b)	What are the three basic systems and their components of water resource management? Explain in detail the two approaches of planning and management of water resources with suitable state level examples.	4
		OR	
Q.2	a)	What are the objectives of Planning and management of water resources? Enlist the basic principles of Planning and management of water resources with the reference to NWP 2012..	6
	b)	Enlist and elaborate in detail the guidelines as suggested by National Commission for Integrated Water Resources Development for industrial as well as domestic water utilization and its optimization.	4
Q.3	a)	Explain the necessity of 'National water laws' and Compare NWL 2007 and 2010 .	6

	b)	Write the summary recommendations of Second Irrigation Commission (1972) according to different sections and subsections .	4
		OR	
Q.4	a)	Elaborate in detail "Planning for Water Security" regulations with reference to National water Framework 2016	4
	b)	Explain in depth the principles of fixation water rates at National level on the basis of National water Policy. Give the final values of Maharashtra state for irrigation water supply. Explain the water tariff norms of Pune water division with reference to Pune DSR and Maharashtra Pradhikaran Board, Pune Division	6