

B.Tech. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

December, 2016

00593

BICE-015 : WATER RESOURCES ENGINEERING

Time : 3 hours

Maximum Marks : 70

*Note : Attempt any **seven** questions. All questions carry equal marks. Use of scientific calculator is permitted. Assume missing data, if any.*

1. Describe the different types of wells, based on the method of construction and discharge. 10

2. Discuss the Thiessen-Polygon method and Isohyetal method for determining the mean precipitation over an area. 10

3. Explain base period, delta and duty. How are these terms related to water requirements of crops ? 10

4. Find out the capacity of the reservoir, if its culturable area is 65000 ha, from the given data : 10

<i>Sr. No.</i>	<i>Type of crop</i>	<i>Sugarcane</i>	<i>Wheat</i>	<i>Rice</i>
1	B in days	330	120	120
2	D in ha/cumec	2200	1800	800
3	Intensity of Irrigation (%)	15	20	10

5. What do you understand by consumptive and conjunctive uses of water ? What are the advantages and constraints of conjunctive use of water ? 10
6. Explain the different types of dams and their selection criteria in detail. 10
7. Describe the design procedure for weirs on permeable foundations. 10
8. Discuss the different types of spillways with the help of neat sketches. 10
9. Describe the different types of canal falls. How can they be used as flow measuring devices ? 10
10. Write short notes on the following : 5+5
- (a) Canal Regulator
- (b) Canal Escape
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