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BICE-015

**B. TECH. CIVIL ENGINEERING
(BTCLEVI)**

Term-End Examination

June, 2019

BICE-015 : WATER RESOURCES ENGINEERING

Time : 3 Hours

Maximum Marks : 70

Note : Attempt any five questions. All questions carry equal marks. Assume suitable data, if any.

1. (a) What do you understand by Hydrological cycle ? Explain with the help of a neat diagram. 6
- (b) Discuss different types of wells, with the help of suitable sketches. 8
2. (a) Explain the necessity of irrigation. Describe different types of irrigation systems. 8

(A-6) P. T. O.

- (b) Describe, in detail, the consumptive use of water. 6
3. (a) Describe the Blighs seepage theory in detail. 7
- (b) Describe the essential components of weir and barrage, in detail. 7
4. (a) Describe different types of dams, with the help of suitable sketches. 8
- (b) Describe different zones of storage in a reservoir. 6
5. (a) Explain different types of intake structures, giving suitable sketches. 7
- (b) List different types of canal regulation works and explain them in detail. 7
6. (a) What are cross-drainage works ? Discuss different factors to be considered in their selection. 7
- (b) Describe the pros and cons of different canal lining materials. 7

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7. Write short notes on any *four* of the following :

$$4 \times 3\frac{1}{2} = 14$$

- (a) Spillway
- (b) Command Area
- (c) Reservoir Yield
- (d) Canal Falls
- (e) Aquiclude
- (f) Flood Prediction