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BICE-015

B.TECH. (CIVIL ENGINEERING)
BTCLEVI

00171

Term-End Examination

December, 2013

BICE-015 : WATER RESOURCES ENGINEERING

Time : 3 hours *Maximum Marks : 70*

Note : *Answer **any seven** questions.*
*All questions carry **equal marks**.*

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1. Define intensity of rainfall, run off and catchment area. With the help of neat sketches describe the automatic recording raingauges. **10**

2. Explain different methods of flood estimation techniques. Mention the empirical formula used for flood estimation. **10**

3. Define **any two** of the following terms indicating their significance : **5x2=10**

(a) Field capacity

(b) Wilting point

(c) Available moisture content

4. One distributary is to be designed for irrigating 4500 hectares in Rabi crop and 2500 hectares in Kharif crops. The water requirements of Rabi and Kharif crops are 15cm and 20cm depths respectively. If the kor- period for the above two crops are 4 weeks and 2.5 weeks respectively. Determine the discharge of the distributary. 10

5. What are the main objects of diversion head work ? What points should be kept in view while selecting a site for diversion head work ? 10

6. What are the different types of weir ? Explain with neat sketches the circumstances under which each type is adopted. 10

7. Describe in brief the stability analysis of gravity dams. 10

8. What do you understand by siphon spillway ? Draw sketch of a saddle siphon spillway and explain the functions of its various components. 10

9. With the help of neat sketches, describe a distributary head regulator. 10

10. How does various types of aqueducts and syphon aqueducts are classified. Discuss the possible cause of failure of cross drainage work. 10