No. of Printed Pages : **2**

BICEE-008

00249

DIPLOMA CIVIL ENGINEERING

Term-End Examination

June, 2013

BICEE-008 : IRRIGATION ENGINEERING

Time : 2 hours *Maximum Marks : 70*

Note : *Attempt **any five** questions, but the question no.1 is **compulsory**. Use of scientific calculator is **permitted**.*

1. Write ***True/False*** for the following : 7x2=14

   (a) Main crops of rabi season are wheat, barley and gram.

   (b) Evaporation from oceans is the major source of moisture for precipitation.

   (c) Injection through wells is a way of artificial recharge of ground-water.

   (d) Isolated patches of high lands can be better served by well irrigation.

   (e) Base period of a crop is greater than crop period

   (f) A weir is an obstruction.

   (g) Canal lining is advisable over the expansive clay.

2. Explain the different sources of irrigation water and assess the need of irrigation in India. 14

3. (a) Define Duty, Delta and Base period. And explain their interrelation, with equations. 7

(b) Give an account of water requirement for different crops. 7

4. (a) Make a comparative assessment on Kennedy's and Lacey's silt theory. 10

(b) Draw a sketch of canal cross-section, with different parts marked. 4

5. (a) Differentiate between aqueduct and siphon. 7

(b) Bring out the functions and necessities of aqueduct. 7

6. (a) Differentiate between Earthen dam and concrete dam. Give some examples. 7

(b) Explain the types of Earthen dam and discuss some causes of failure. 7

7. (a) Explain the radius of influence and the depression head, in regard to tube wells. 7

(b) Make an assessment of advantages of tube wells. 7

8. Write short note on *any four* of the following : **4x3½=14**

(a) Cross regulator

(b) Confined aquifer

(c) Wind mills

(d) Intensity of irrigation

(e) Energy dissipater

(f) Critical velocity ratio.