

DIPLOMA CIVIL ENGINEERING

Term-End Examination

December, 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 or False of the following : 7x2=14

- (a) Rabi season is also called as Post-Monsoon season.
- (b) Ground water is more widely distributed and provide instant access and assured source of irrigation.
- (c) Transit loss in well irrigation are higher than canal irrigation.
- (d) Duty of water is measured in ha/m²/sec
- (e) Head regulator helps to regulate the discharge in a canal.
- (f) Water logging lead to accumulation of salt, due to capillary action.
- (g) The location of falls has nothing to do with the topography.

2. (a) Give an account of different types of rain gauges. 7
(b) Differentiate between Gross Command area and cultivable command area. 7
3. (a) Explain the different methods of well construction. 7
(b) Make an assessment of different types of aquifers, with neat sketch. 7
4. (a) Differentiate between Weir and Barrage. 7
(b) What is meant by canal fall ? Explain different types of canal falls. 7
5. (a) Draw a sketch of cross-section of a gravity dam, with different parts labelled. 10
(b) Define canal escapes, and mention some of its functions. 4
6. What is meant by water logging ? Explain the causes and consequences of water logging, with some remedies to prevent it. 14
7. (a) Bring an account of different types of tube wells. 7
(b) Explain some methods of construction of boring. 7

8. Write short note on any four of the following :

- (a) Types of canal lining **4x3½=14**
 - (b) Super passage
 - (c) Unconfined aquifer
 - (d) Spillways
 - (e) Manning's formula and its application
 - (f) Catchment area
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