

FOURTH SEMESTER DIPLOMA EXAMINATION IN CIVIL ENGINEERING—
OCTOBER, 2014

IRRIGATION ENGINEERING

[Time : 3 hours

(Maximum marks : 100)

PART—A

(Maximum marks : 10)

Marks

I Answer all questions in one or two sentences. Each question carries 2 marks.

1. Define duty.
2. Differentiate lift irrigation and flow irrigation.
3. Explain usage of drainage gallery.
4. Explain base period.
5. Explain surplus escape. (5×2=10)

PART—B

(Maximum marks : 30)

II Answer *any five* of the following questions. Each question carries 6 marks.

1. Explain factors effecting runoff.
2. Differentiate between storage head work and diversion head work.
3. List the various methods of irrigation.
4. Explain canal head work.
5. Explain cross drainage work.
6. What are various methods for improving duty ?
7. Explain various types of river training and protection works. (5×6=30)

PART—C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT—I

- III (a) Explain different methods for measuring velocity of flow in a river. 7
- (b) Explain different type of rain gauges. 8

OR

	Marks
IV (a) Explain duty, delta and base period. Also establish relation between them.	7
(b) List advantages and disadvantages of irrigation.	8

UNIT—II

V (a) Explain different types of head works.	7
(b) Differentiate barrage and weir.	8

OR

VI (a) Explain percolation gradient and effect of percolation on irrigation works	7
(b) Explain scouring and silting and remedies to reduce them.	8

UNIT—III

VII (a) What are the points to be considered for site selection for a reservoir?	7
(b) What are causes of failure of earth dam?	8

OR

VIII (a) What are the causes of failure of gravity dam?	7
(b) Explain with sketch practical profile of a gravity dam.	8

UNIT—IV

IX (a) State classification of canals and explain.	7
(b) Explain the terms canal linings and different methods of canal lining.	8

OR

X (a) What are the causes of soil erosion and explain preventive methods to reduce soil erosion?	7
(b) Describe with sketch aqueduct and super passages.	8