

TED (15/19) - 4012
(REVISION-2015/19)

1503240128

Reg.No.....
Signature.....

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2024**

IRRIGATION ENGINEERING

(Maximum Marks:100)

(Time: 3 Hours)

PART - A

(Maximum Marks : 10)

Marks

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

1. List the major types of irrigation.
2. Define the term weir.
3. Define Maximum Water Level.
4. Define balancing depth.
5. State the term soil erosion.

(5 x 2 = 10)

PART - B

(Maximum Marks: 30)

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

1. List the factors affecting run-off.
2. Give a brief description about the benefits of irrigation.
3. Show the different parts of weir with a neat sketch.
4. Describe the terms (i) Uplift pressure (ii) Creep length
5. List the forces acting on a gravity dam.
6. Describe the factors influencing selecting the site for a reservoir.
7. Describe the methods of prevention of soil erosion.

(5 x 6 = 30)

PART – C

(Maximum Marks: 60)

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

UNIT - I

III (a) Define (i) Duty (ii) Delta (iii) Base period (d) Crop period

(8)

(b) Derive the relationship between Duty, Delta and Base period. (7)

OR

IV (a) Distinguish between flow and lift irrigation. (8)

(b) Describe the working of tipping bucket rain gauge with a neat sketch. (7)

UNIT – II

V (a) Explain the terms (i) Fish ladder (ii) Divide wall (8)

(b) Show the component parts of a diversion head works with a neat sketch. (7)

OR

VI (a) Explain the terms (i) Percolation (ii) Scour. (8)

(b) Describe the effect of percolation and their protective work in irrigation structure (7)

UNIT – III

VII (a) Distinguish between rigid dam and non-rigid dam. (8)

(b) Explain the forces acting on a gravity dam with the aid of a neat sketch. (7)

OR

VIII (a) Explain the types of dam according to use. (8)

(b) Explain the terms (i) Tank sluice (ii) Flush escape. (7)

UNIT – IV

IX (a) Define the terms

(i) Spoil bank (ii) Canal lining (iii) Berm. (iv) Saturation gradient. (8)

(b) Draw and mark the parts of a canal cross section in cutting. (7)

OR

X (a) Explain the types of cross drainage works with neat sketch. (8)

(b) Explain the causes and effects of soil erosion. (7)
