

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

A22-03417

Reg.No.....

Signature.....

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, APRIL- 2022**

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. Define base period.
 2. Define Perennial Irrigation.
 3. Mention any two use of weir.
 4. What is tank sluice?
 5. Classify canal based on nature of source of supply. (5 x 2 = 10)

PART - B

(Maximum Marks: 30)

- II Answer **any five** questions from the following. Each question carries 6 marks.
1. Explain factors affecting runoff.
 2. What is the purpose of providing dividing wall and under sluice.
 3. Briefly explain the forces acting on Gravity Dam.
 4. What is Gallery of dam? Explain briefly the type of Galleries.
 5. Sketch the three types of typical cross section of canal.
 6. Explain the function of canal escape.
 7. Explain Uplift pressure. (5 x 6 = 30)

PART - C

(Maximum marks: 60)

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

UNIT - 1

- III (a) Differentiate Duty and Delta? State the relation between them. (8)
- (b) How rainfall is measured and expressed? Draw the sketch of Symson's raingauge (7)

OR

- IV (a) What are the methods to improve duty?. (7)
(b) What are the advantages and disadvantages of Irrigation? (8)

UNIT – 2

- V (a) Draw a neat sketch of diversion head work with all parts and write the
Function of fish ladder and head regulator. (8)
(b) List the protective works for a weir. (7)

OR

- VI (a) Differentiate between barrage and weir with neat sketches. (8)
(b) What are the factors to be considered for selection of site for diversion works.(7)

UNIT – 3

- VII (a) Explain any three type of Earthen Dam with its diagram (8)
(b) Explain Percolation gradient and Phreatic line. (7)

OR

- VIII (a) Briefly explain the failures in Gravity Dam . (8)
(b) Explain any two type of spillway with its diagram. (7)

UNIT – 4

- IX (a) Explain the necessity and type of canal lining. (8)
(b) Explain super passage and aqueduct with figures (7)

OR

- X (a) Explain the terms Berm and Balancing Depth . . (8)
(b) Explain preventive measures to reduce soil erosion (7)

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