

TED (15/19) – 4012  
(Revision – 2015/19)

**N22 - 04066**

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

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/  
COMMERCIAL PRACTICE – NOVEMBER – 2022**  
**IRRIGATION ENGINEERING**

(Maximum Marks : 100)

(Time : 3 hours)

**PART – A**  
(Maximum Marks : 10)

Marks

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

1. Define perennial irrigation.
2. Define base period.
3. Define percolation.
4. Name three types of non-rigid dams.
5. Define berms.

(5x2=10)

**PART – B**  
(Maximum Marks : 30)

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

1. Write various types of irrigation.
2. A crop requires a total depth of 920mm of water for a base period of 120 days. Find the duty of water.
3. Explain weir under different discharge conditions with the help of sketches.
4. Define (a) uplift (b) creep length (c) scour.
5. Explain low dams and high dams.
6. Explain siphon spillway with the help of sketch.
7. Draw three types of cross sections of canals.

(5x6=30)

**PART – C**  
(Maximum Marks : 60)

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

**UNIT – I**

**III.** (a) Write any six advantages of irrigation. (6)

(b) Explain the factors affecting run-off. (9)

**OR**

IV. (a) What is a gauge well? Draw neat figure of a gauge well. (6)

(b) Explain working of a simon's rain gauge with a neat sketch. (9)

**UNIT – II**

V. (a) Write any 6 factors for selection of a suitable site for a diversion head. (6)

(b) Draw a neat sketch of a diversion head work showing components part. Briefly explain the use of each part. (9)

**OR**

VI. (a) Distinguish between barrage and weir with the help of sketch. (6)

(b) With the help of a neat sketch explain the component parts of a weir. (9)

**UNIT –III**

VII. (a) Write different types of a dam. (6)

(b) Explain different types of surveys required for the reservoirs. (9)

**OR**

VIII. (a) Name any 6 forces acting on a gravity dam. (6)

(b) With the help of sketch explain the types of Earth dam. (9)

**UNIT – IV**

IX. (a) Define canal lining. Write the advantages of canal lining. (6)

(b) With the help of a neat sketch explain canal drop. (9)

**OR**

X. (a) Define soil erosion. Write any four methods of prevention of soil erosion. (6)

(b) Define cross drainage works. List the types of cross drainage works? Draw a neat sketch of a syphon aqueduct. (9)

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