

TED (15) -4012
(Revision- 2015)

A20-00452

Reg.No.....
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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE – APRIL -2020.

IRRIGATION ENGINEERING

(Maximum Marks :75)

[Time : 2.15 hours]

PART–A

Marks

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

1. What are the two main crop seasons followed in India.
2. What is meant by scouring sluice.
3. Define saturation gradient.
4. What is meant by drainage gallery.
5. Define the term balancing depth of cutting.

(3x2=6)

PART - B

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

1. State the different methods of expressing duty.
2. What are the different methods of Irrigation.
3. What are the component parts of a diversion work.
4. Write down the classification of head works and the suitability of each headwork.
5. Explain the situation suitable for Earth dams.
6. How the canals are classified based on carrying capacity.
7. What is a berm. What are the advantages of providing berms.

[4x6 =24]

PART - C

(Answer **any of the three units** from the following. Each full question carries 15 marks)

UNIT I

- III** (a) What are the characteristics of Good, bad and Average catchment. (6)
- (b) What is run-off. What are the factors affecting run-off of water. (9)

OR

IV (a) A tank has a capacity of 50 million cubic meters. If the duty is 115 hectares/million cu.m. How many hectares of land can be irrigated under the tank with two fillings. (6)

(b) Explain the method of measurement of velocity by velocity roads. (9)

UNIT- II

V (a) List the factors to be considered for selection of site for diversion works. (6)

(b) Describe with sketch the component parts of a weir. (9)

OR

VI (a) What is meant by marginal Embankment. What are the advantages of providing embankments. (6)

(b) What is meant by Spurs or Groynes. How are they classified. (9)

UNIT- III

VII (a) List the forces acting on a gravity dam. (6)

(b) Sketch the practical profile of a gravity dam and mark the important parts. (9)

OR

VIII (a) What is meant by a spillway. What are the component parts of a spillway. (6)

(b) Explain how the drainage arrangements are provided in an earth dam. (9)

UNIT – IV

IX (a) Sketch the typical cross section of a canal in cutting, partial cutting and embankment. (6)

(b) What is meant by lining of canals. What are the temporary and permanent linings provided in canals. (9)

OR

X (a) Draw the cross section of a canal drop and mark the important parts. (6)

(b) What is soil erosion. What are the methods of prevention of soil erosion. (9)
