

TED (10) 4002
(Revision 2010)

Reg.No.....
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FOURTH SEMESTER DIPLOMA EXAMINATION IN CIVIL ENGINEERING
NOVEMBER - 2016

IRRIGATION ENGINEERING

Maximum marks: 100

Time: 3 hours

PART - A
(Maximum marks: 10)

Marks

I. Answer all questions. Each question carries 2 marks.

1. Name the two type of Lift Irrigations.
2. What is meant by Hydrologic cycle?
3. Define Barrage
4. Classify the canals based on the alignment.
5. What is meant by the term "Berm"?

(5 x 2 = 10)

PART - B
(Maximum marks: 30)

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

1. Write the factors affecting run off.
2. What are the points to be kept in mind during the selection of river gauge stations?
3. Enumerate the points to be considered while selecting the site for diversion head works.
4. What are the data to be collected during the Geological investigation for a dam?
5. What is drainage gallery? Draw the section of the dam showing the drainage gallery.
6. List the effects of erosion in irrigation works.
7. What are the various factors considered for surface irrigation?

(5 x 6 = 30)

PART - C

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

UNIT - I

- III a) What are the methods adopted for improving duty of irrigation water? (7)
b) What is meant by Hydrology? Draw the Hydrologic cycle and mark the movement of water. (8)

OR

- IV a) (i) What are the disadvantages of irrigation? (3½)
(ii) State the main crop seasons in India. (3½)
b) (i) What is meant by catchment area? (4)
(ii) A catchment area of 35.25 square kilometers is situated in the central India in a hilly region. What would be the maximum flood discharge expected from the basin. Use the Dicken's coefficient as 19.5. (4)

UNIT - II

- V a) Write the component parts of a weir. (7)
b) Explain the following
(i) Creep length (ii) Head Regulator
(iii) Uplift (iv) Percolation (8)

OR

- VI With the help of a diagram, write the various components and their functions of a diversion headwork. (15)

UNIT - III

- VII a) Discuss the Causes of failure of earthen dams. (7)
b) What are the situations suitable for earth dams? (8)

OR

- VIII a) What is the function of a spill way in a dam? What are the types of spillways? (7)
b) What are the points to be considered for site selection for a reservoir? (8)

UNIT - IV

- IX a) What is scour and what are the factors which depends the scour? (7)
b) List different cross drainage works and mention where they are provided (8)

OR

- X a) What are the disadvantages of sprinkler irrigation? (7)
b) List the effects of water logging and give the preventive measures. (8)
