Roll No. ..... Total Pages : 02

BT-7/D-19 37230

IRRIGATION ENGINEERING-II

CE-403N

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. Assume any missing data.

Unit I

1. (a) What is meant by 'Canal Falls' and where are they located ? 5
   (b) Discuss briefly various types of falls with neat sketches. Also discuss the suitability of each type. 10

2. Design a 1.5 metres Sarda type fall for a canal having a discharge of 12 cumecs, with the following data : 15

   Bed level v/s - 103 m

   Side slope of channel - 1:1 m

   Bed level d/s - 101.5 m

   Full supply level v/s - 104.5 m

   Bed width v/s and d/s - 1.0 m

   Soil - Good loam

   Assume Bligh's coefficient - 6

Unit II

3. (a) Explain Canal Escapes and also discuss its types. 7
   (b) What is Canal Outlet ? Also discuss the requirements of a Good module. 8

4. Write short notes on the following : 15
   (a) Aqueduct
   (b) Level crossing
   (c) Syphon aqueduct.

   Draw neat sketch for each.

Unit III

5. (a) Define Dam. Explain various types of Dams with sketch. 8
   (b) Discuss factors governing the selection of particular type of dam. 7

6. (a) Differentiate Homogeneous Embakment type and Diaphrem type Earthen Dam. 6
   (b) Discuss the design criteria for earth dams. 9

Unit IV

7. (a) What is spill way gate ? Discuss use of spillway gate and list its types. 10
   (b) Write a short note on energy dissipators. 5

8. Explain with sketch 'Chute Spillway' and discuss its design considerations. 15