

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code : 41003

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Fifth Semester

Civil Engineering

080100017 — IRRIGATION ENGINEERING

(Regulation 2008)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is the necessity of irrigation in our country?
2. How will you calculate the field capacity in the soil?
3. What is known as contour irrigation? What is the advantage in it?
4. What do you mean by subsurface irrigation?
5. Write about the types of galleries in a gravity dam.
6. What are the functions of canal escape?
7. What is known as meandering?
8. What do you understand by cross drainage works?
9. How the water losses can be minimized?
10. Write a note on water users associations, in irrigation management.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the terms (1) Field capacity of the soil (2) Permanent wilting point (3) Effective depth of root zone and (4) Consumption use of water. (8)
- (ii) Discuss about the factors affecting duty in irrigation field. (8)

Or

- (b) (i) Explain the crop seasons in our country and their importance. (8)
(ii) Define and derive the relationship between the following: (1) Duty (2) Delta (3) Crop period (4). Base period. (8)
12. (a) (i) Explain the canal irrigation methods with neat sketches. (8)
(ii) Discuss about the importance of lift irrigation and drip irrigation practice. (8)

Or

- (b) (i) Describe the method of sprinkler irrigation system and its advantages. (8)
(ii) Discuss about the merits and demerits of tank irrigation system. (8)
13. (a) (i) Discuss about the merits and demerits of various types of dam. (8)
(ii) What are the factors on which selection of site for a dam depends? (8)

Or

- (b) (i) Describe the causes of failure of earth dams. (8)
(ii) Enumerate various types of spillways and their functions. (8)
14. (a) (i) Explain various methods of discharge measurement in a canal. (8)
(ii) Describe the functions of a distributary head regulator and a cross regulator. (8)

Or

- (b) (i) Discuss about the selection of suitable type of cross-drainage works. (8)
(ii) Explain various types of river training and protection works. (8)
15. (a) (i) Describe the methods of form development works. (8)
(ii) How will you improve the irrigation water management? (8)

Or

- (b) (i) Describe the process of participatory irrigation management and its benefits. (8)
(ii) How will you make the performance evaluation, in irrigation water management? (8)