

Roll No.

Total Pages : 2

BT-6/M-20

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IRRIGATION ENGINEERING-I

Paper-CE-304 N

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *five* questions in all, selecting *one* question from each unit. All questions carry equal marks.

UNIT-I

1. (a) Define irrigation. Discuss briefly the benefits as well as ill effects of irrigation. 8
- (b) Explain the terms .
 - (i) Flow irrigation.
 - (ii) Lift irrigation. 7
2. (a) Explain sprinkler irrigation method in detail with the help of sketch. 9
- (b) What is meant by duty ? What are the factors affecting duty ? 6

UNIT-II

3. (a) The gross commanded area for a distributary is 6000 hectares, 80% of which is culturable irrigation. The intensity of irrigation for Rabi season is 50% and that for kharif season is 25%. If the average duty at the head of distributary is 2000 heat/cumec for Rabi season

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and 900 hect/cumec for Kharif season, find out the discharge required at the head of distributary from average demand consideration. 5

(b) Discuss distribution system for canal irrigation. 10

4. What is meant by canal lining and what are its advantages. Also list different types of canal lining and discuss the design and construction features of concrete lining. 15

UNIT-III

5. (a) Discuss the loss of water in canal by seepage. Also mention the factors which cause seepage. 8

(b) Define water logging. Discuss the measure to control water logging. 7

6. Write short notes on :

(a) Meandering of river.

(b) Aggrading and degrading rivers.

(c) High water, low water and mean water training. 15

UNIT-IV

7. What do you mean by canal outlet ? What are the requirements of a good outlet ? Discuss different types of outlets. 15

8. Enumerate the different methods which are used for drilling tubewells. Discuss any *one* of these method in details. 15