

Exam.Code:0947
Sub. Code: 7114

1078
B.E. (Civil Engineering)
Fifth Semester
CIV-502: Irrigation Engineering – I

Max. Marks: 50

Time allowed: 3 Hours

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit. Assume suitable missing data. Use of calculators is allowed.

x-x-x

- I. Describe the following:-
 - a) Advantages of irrigation
 - b) Bandhara Irrigation
 - c) Classification of irrigation project.
 - d) Optimum capacity of tube well.
 - e) Afflux embankments. (5x2)

UNIT – I

- II. Explain the salient features of the sprinkler irrigation system. What are the conditions for which the sprinkler irrigation is suitable? How does it differ from drip irrigation? (10)
- III. What are Lacey's basic regime equation? Derive the equation for Wetted perimeter, Hydraulic radius and bed slope. (10)
- IV.
 - a) What are the advantages and disadvantages of lining of canals?
 - b) What are the qualities of good lining material? How far these qualities are satisfied by the cement concrete lining? (5,5)

UNIT – II

- V.
 - a) Discuss the design and construction of tile drains.
 - b) What are main causes of water logging? (5,5)
- VI.
 - a) What considerations will you have while planning for a water resources development project?
 - b) Discuss the engineering economy of a water resources project. (5,5)
- VII.
 - a) Explain the terms specific yield, transmissibility and specific storage of a well.
 - b) What are various purposes for which training work is required? (5,5)

x-x-x