

Code No: **R1641012**

R16

Set No. 1

IV B.Tech I Semester Regular/Supplementary Examinations, Jan/Feb - 2022

WATER RESOURCES ENGINEERING - II

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B

Answer ALL sub questions from Part-A

Answer any FOUR questions from Part-B

PART-A (14 Marks)

1. a) What are the advantages of crop rotation? [2]
- b) What are the economic benefits of canal lining? [2]
- c) What are the objectives of river training work? [3]
- d) Define exit gradient. [2]
- e) What is a limiting height of a gravity dam? [2]
- f) Discuss ogee spillway. [3]

PART-B (4x14 = 56 Marks)

2. a) Briefly explain the necessity and importance to have irrigation. [7]
- b) Discuss the factors affecting duty of water. [7]
3. a) Enumerate various types of linings used for canal. [7]
- b) Compare Kennedy's and Lacey's silt theories. Why is Lacey's conception superior to that of Kennedy's? [7]
4. a) Explain the various types of cross drainage work. [7]
- b) Differentiate between head regulator and cross regulator. [7]
5. a) What is meant by "Afflux"? How does it effect the design of weirs and barrages? [7]
- b) Explain in detail about Bligh's creep theory. [7]
6. a) Explain different investigations necessary to determine economical capacity of a reservoir? [7]
- b) Discuss the causes of failure of a gravity dam. [7]
7. a) Explain how energy dissipation arrangements are made below a spillway. [7]
- b) Explain the classification of earth dams in detail with neat sketches. [7]

