

Code No: **RT41014**

R13

Set No. 1

IV B.Tech I Semester Supplementary Examinations, February/March - 2018
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 THREE questions from Part-B

PART-A (22 Marks)

1. a) What do you understand by evapo-transpiration? [4]
b) Bring out the difference between a contour canal and a ridge canal. [4]
c) List out draw batch in Kennedy's theory. [4]
d) Draw component parts of a diversion head work. [4]
e) Classify various types of the dams. [2]
f) List various failures of earth dams. [4]

PART-B (3x16 = 48 Marks)

2. a) Define duty, delta and base period. Derive the relationship between them. [8]
b) How do you improve the duty? State any two practical applications of duty of water. [8]
3. a) Discuss the classification of canals? [8]
b) Explain in detail about lacey's regime theory. [8]
4. a) Define cross drainage works? Classify various cross drainage works. [6]
b) Explain various objectives of river training and discuss about guide banks. [10]
5. a) Explain in detail about Bligh's creep theory. [8]
b) What do you understand by 'silt extractor' and 'silt ejector'? [8]
6. a) Explain different investigations necessary to determine economical capacity of a reservoir? [8]
b) Explain the factors affecting trap efficiency and also suggest suitable methods of increasing the useful life of a reservoir. [8]
7. a) What are the modes of failure which occur in the earthen dams? [8]
b) Write short notes on
(i) Ogee spillway
(ii) Side channel spillway [8]