Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech III Year II Semester Supplementary Examinations Dec 2019
WATER RESOURCES ENGINEERING-II
(Civil Engineering)

Time: 3 hours   Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1   a   What do you understand by a fall in a canal? Why it is necessary?   6M
    b   Explain any two types of canal falls with neat sketch.   6M

OR

2   a   Explain the design of a cross regulator.   6M
    b   What is a cross drainage work? On what factors does the selection of suitable type of cross drainage work depend?   6M

UNIT-II

3   a   What is 'stream gauging'? What are the criteria for selection of a gauging site?   6M
    b   Explain the 'slope area method' for the measurement of discharge.   6M

OR

4   a   Into a stream, with no trace of salt initially, a salt solution with a concentration of 20 mg/c.c. is introduced at a constant rate of 2 litres per minute. The samples collected at a downstream section sufficiently far away indicated an equilibrium salt concentration of 0.05ppm. Determine the discharge in the stream from this data.   6M
    b   Explain the 'Stage-discharge curve'.   6M

UNIT-III

5   a   What do you understand by 'meandering'? What are the basic factors controlling the process of meandering?   7M
    b   Explain the difference between aggrading type of river and degrading type of river.   5M

OR

6   a   Explain the classification of the river training works.   7M
    b   What are the effects of levees on flood flows?   5M

UNIT-IV

7   a   Explain the various types of reservoirs.   6M
    b   Describe the various investigations required for reservoir planning.   6M

OR

8   a   Explain the 'mass curve method' that can be used for determining the demand rate from a reservoir of a given capacity.   7M
    b   What are the various methods of reservoir sediment control?   5M

UNIT-V

9   a   Define a dam. Explain the classification of dams, according to use.   5M
    b   Explain the factors on which selection of site for a dam depends.   7M

OR

10   a   What do you understand by gravity dam? Explain the various forces that act on a gravity dam.   8M
    b   Derive an expression for the limiting height of a gravity dam.   4M

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