

Reg. No:

--	--	--	--	--	--	--	--	--	--

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech III Year II Semester Supplementary Examinations March-2021**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 is a 'Canal fall'? What is its necessity? How is the location of a fall decided? 8M
b Explain the following: (i) Head regulator and (ii) Cross regulator. 4M

OR

- 2 a What is a 'Cross-drainage work'? What are the various types of Cross-drainage works? 6M
b Explain the factors which affect the selection of the suitable type of Cross-drainage work. 6M

UNIT-II

- 3 a What is the necessity of stream gauging? What are the factors to be considered in locating a stream gauging site? 8M
b Explain the slope-area method. 4M

OR

- 4 a Into a stream, with no trace of salt initially, a salt solution with a concentration of 20mg/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 is 'Meandering'? What basic factors control the process of meandering? 6M
b Explain the difference between 'aggrading type of river' and 'degrading type of river'. 6M

OR

- 6 a What is a 'Groyne'? What are the various types of groynes? 6M
b What is a 'levee'? Explain the design of a levee. 6M

UNIT-IV

- 7 a What is a reservoir? What are the various types of reservoirs? 4M
b What are the various investigations required for reservoir planning? Explain in detail. 8M

OR

- 8 a Explain the method of calculating reservoir capacity for a specified yield, from the mass inflow curve. 8M
b Explain the term 'flood routing'. What are the various methods of flood routing? 4M

UNIT-V

- 9 a Explain the classification of dams according to material of construction. 4M
b Discuss the physical factors that govern the selection of type of dam. 8M

OR

- 10 a Discuss the various modes of failure of a gravity dam. 8M
b Distinguish between a low gravity dam and a high gravity dam. Derive the expression used for such a distinction. 4M

*** END ***