

Hall Ticket Number :

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R-19

Code: 19A141T

II B.Tech. II Semester Supplementary Examinations November 2023

Building Planning & Environment

(Civil Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

Marks CO BL

UNIT-I

1. Elaborate about municipal bye laws and its purpose? 14M 1 L2

OR

2. Brief explain about the lighting and Ventilation. 14M 1 L2

UNIT-II

3. Write down the functional requirements of the following elements of a residential building.
I. Living room
II. Kitchen &
III. Bath and Water Closet 14M 2 L2

OR

4. Describe the importance of grouping. 14M 2 L2

UNIT-III

5. List various types of recreation buildings. 14M 3 L2

OR

6. Elaborate various factors to be considered while planning office building. 14M 3 L2

UNIT-IV

7. Elaborate the importance of float and critical path. 14M 4 L2

OR

8. Recall the objectives of network analysis. 14M 4 L2

UNIT-V

9. Demonstrate the term energy conservation. 14M 5 L2

OR

10. Elaborate various thermal comfort standards. 14M 5 L2

Important Note: 1. On completing your answers. Compulsorily draw diagonal cross line on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 32+8=40, will be treated as malpractice.

Hall Ticket Number :

R-19

Code: 19A144T

II B.Tech. II Semester Supplementary Examinations November 2023

Hydraulics Engineering

(Civil Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

Important Note: 1. On completing your answers. Compulsorily draw diagonal cross line on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 32+8=40, will be treated as malpractice.

		Marks	CO	BL
UNIT-I				
1.	Find the momentum thickness for the velocity distribution in the boundary layer given by $u/U = 2(y/\delta) - (y/\delta)^2$	14M	1	2
OR				
2. a)	Define laminar boundary layer, turbulent boundary layer	6M	1	1
b)	What is meant by laminar sub-layer and boundary layer thickness (δ)	8M	1	1
UNIT-II				
3.	Find the velocity of flow and rate of flow of water through a rectangular channel of 6 m wide and 3 m deep, when it is running full. The channel is having bed slope $s = 1$ in 2000. Take Chezy's constant $C = 55$.	14M	2	2
OR				
4. a)	Explain about hydraulic jump	6M	2	1
b)	The depth of flow of water at a certain section of a rectangular channel of 4 m wide, is 0.5 m. This discharge through the channel is $16 \text{ m}^3/\text{s}$. If a hydraulic jump takes place on the downstream side, find the depth of the flow after the jump.	8M	2	2
UNIT-III				
5.	Water is flowing through a pipe at the end of which nozzle is fitted. The diameter of the nozzle is 100 mm and head of water at the centre nozzle is 100 m. Find the force exerted by the jet of water on a fixed vertical plate. The coefficient velocity is given as 0.95.	14M	3	2
OR				
6.	Derive the force on flat vertical plate moving in the direction of jet	14M	3	2
UNIT-IV				
7.	Explain about main parts of the Kaplan turbine with a neat sketch	14M	4	1
OR				
8.	Explain about characteristic curves of turbines	14M	4	1
UNIT-V				
9.	A centrifugal pump delivers water against a net head of 14.5 m and design speed of 1000 r.p.m. The vanes are curved back to an angle of 30° with the periphery. The impeller diameter is 300 mm and outlet width is 50 mm. Determine the discharge of the pump if manometric efficiency is 95%.	14M	4	2
OR				
10.	Explain about classification of hydro power plants	14M	4	1
