

PRN No.	
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PAPER CODE	U313-221-EJE
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December 2023 (ENDSEM) EXAM

TY (SEMESTER - I)

COURSE NAME: IRRIGATION ENGG.II Branch: CIVIL ENGG

COURSE CODE: CVUA31201

(PATTERN 2020)

Time: [1Hr. 30 Min]

[Max. Marks: 40]

(*) Instructions to candidates:

- 1) Figures to the right indicate full marks.
- 2) Use of scientific calculator is allowed
- 3) Use suitable data wherever required
- 4) All questions are compulsory. Solve any one sub question from Question 3 and any two sub questions each from Questions 4,5 and 6 respectively.

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Enlist the factors which govern selection of a particular type of a dam for a particular project.	[2]	1	Understand
Q2	a) Enlist various forces acting on the gravity dam and write importance of each of those forces.	[2]	2	Understand
Q3.	a) Distinguish between the side channel spillway, chute spillway and shaft spillway	[6]	3	Apply
	b) Classify the spillway crest gates and enlist advantages and disadvantages of spillway crest gates.	[6]	3	Apply
Q.4	a) An earthen dam made up of a homogeneous material has the following data – coefficient of permeability of dam material = 5×10^{-4} cm/sec level of top of dam = 200 m level of deepest river bed = 178 m HFL of reservoir = 197.5 m Width of the top of a dam = 4.5 m Upstream slope = 3:1 and downstream slope = 2:1 Determine the coordinates of the base parabola of the phreatic line .	[5]	4	Apply
	b) Draw a line sketch showing all the parts of zoned embankment type , homogeneous embankment type and diaphragm type of earthen dams and write advantages of each of these dams.	[5]	4	Apply