

Total No. of Questions : 4]

SEAT No. :

PD-251

[Total No. of Pages : 2

[6411]-26

B.E. Civil Engineering (Insem.)
DAMS AND HYDRAULICS STRUCTURES
(2019 Pattern) (Semester - VIII) (401011)

Time : 1Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Solve Q.1 OR Q.2, Q.3 OR Q.4*
- 2) *Neat sketches/diagrams must be drawn wherever necessary*
- 3) *Figures to the right indicate full marks for the sub-questions.*
- 4) *Assume suitable data if necessary and state them in your answer clearly.*
- 5) *Use non-programmable pocket size electronic calculator is allowed.*

- Q1)** a) State the objectives regarding the instrumentation in dam safety. [5]
b) Enlist type of dam based on hydraulic action and explain in details anyone. [5]
c) Define the term 'Dam'. Explain the terms gallery, crest and toe of gravity dam. [5]

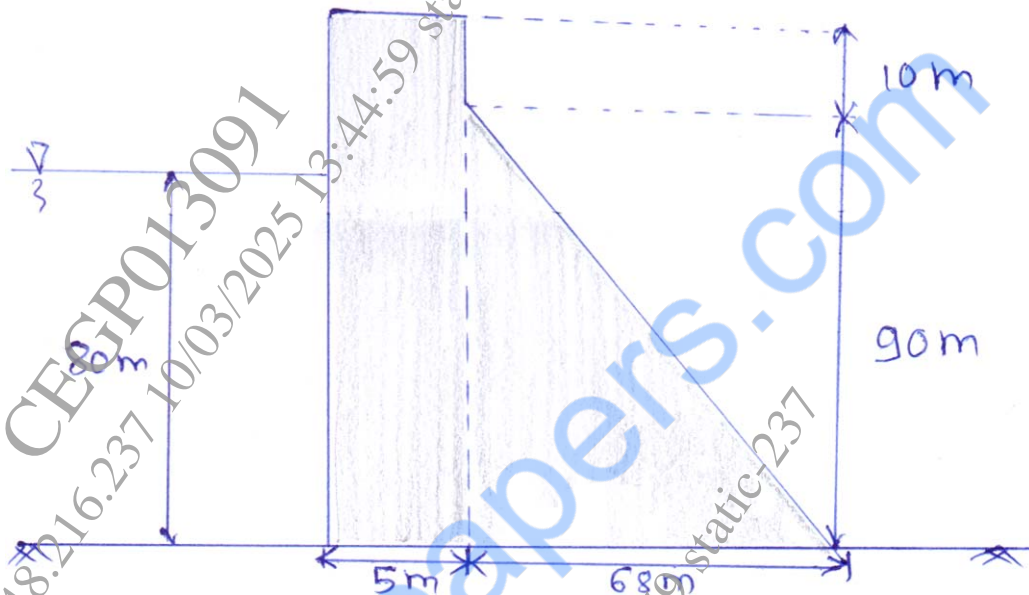
OR

- Q2)** a) Explain with sketches the instrumentation required for monitoring joints & cracks in a concrete dam. [5]
b) Explain with sketch "Inclinometer" used in gravity dam safety. [5]
c) What are salient features of arch dam? [5]

- Q3)** a) What are the Modes of failure of gravity dam? Explain any one with formula. [5]
b) Explain in details elementary profile of gravity dam. [5]
c) With a neat sketch of gravity dam, explain water pressure forces and their effects on dam. [5]

P.T.O.

- Q4) a) For gravity dam, Check the safety of dam as shown in fig 1 with respect to sliding. where unit weight of construction material = 24KN/m^3 & coefficient of friction = 0.75 [5]



- b) Explain in detail concept of Roller compacted dams. [5]
- c) Explain how you will find the uplift pressure on a gravity dam provided with drainage gallery. [5]