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]**

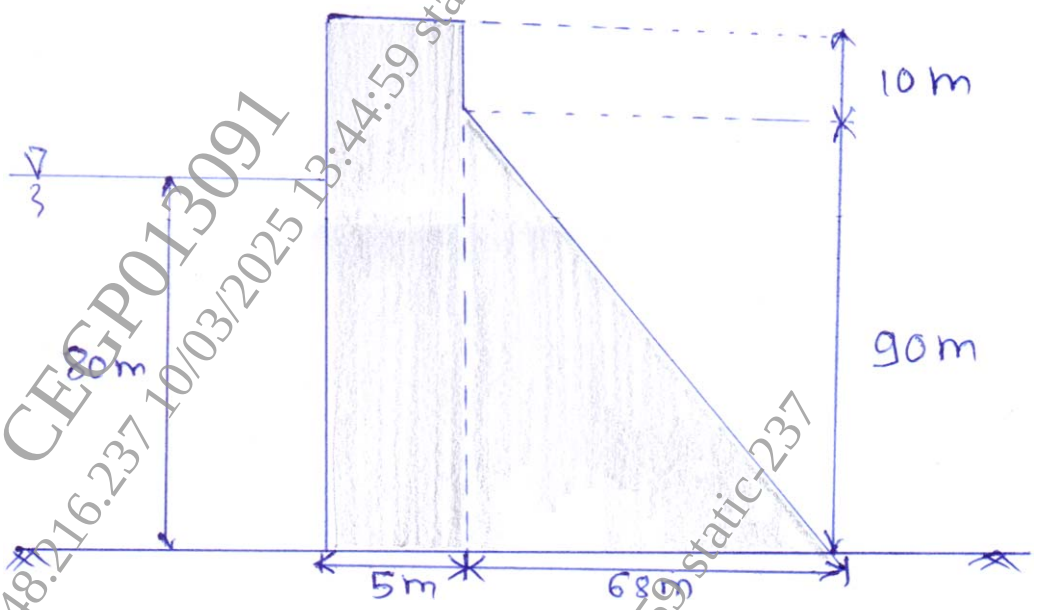
Q3) a) What are the Modes of failure of gravity dam? Explain any one with formula. **[5]**

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]**

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