

Total No. of Questions : 4]

SEAT No. :

PB248

[Total No. of Pages : 2

[62701-36

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

Time : 1 Hour]

[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) Explain the terms upstream side, downstream side, tailwater, spillway & gallery of gravity dam. [5]
- b) State various objectives of dam safety and instrumentation. [5]
- c) State the classification of dam based on purpose & explain in details anyone. [5]

OR

- Q2)** a) Explain with sketches the instrumentation required for monitoring uplift pressure in gravity dam. [5]
- b) State the classification of arch dam and explain anyone. [5]
- c) Explain with sketch "Piezometer" used in gravity dam safety. [5]
- Q3)** a) Explain in detail seismic forces acts on gravity dam with proper sketch. [5]
- b) State and explain various keys provided in gravity dam. [5]
- c) State middle third rule for dam structure. [5]

OR

P.T.O.

Q4) a) Explain in details galleries in a gravity dam with respect to location and function. [5]

b) Describe procedure for roller compacted concrete. [5]

c) As shown in fig.1 profile of gravity dam, check the safety of dam with respect to sliding, where as

unit weight of construction material = 24 KN/m^3

Coefficient of friction = 0.75 [5]

