

320812(20)

**B. E. (Eighth Semester) Examination,
April-May 2020**

(Old Scheme)

(Civil Engg. Branch)

WATER RESOURCES ENGINEERING-II

Time Allowed : Four hours

Maximum Marks : 80

Minimum Pass Marks : 28

***Note : All questions are compulsory. Attempt Part
(a) of each question and any **two** part from
(b), (c) and (d).***

1. (a) Define drainage gallery. 2
- (b) Describe the various forces acting on gravity dam. 7
- (c) What are the various modes of Dam failure of gravity dam? Explain each one of them. 7

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- (d) Explain elementary profile of dam. 7
2. (a) Define hydraulic jump. 2
- (b) Design & sketch the cross section of ogee spillways, when the maximum head over it is 1750 m³/sec and 3 m. The height of the spillways is restricted to 35 m. 7
- (c) Explain different types spillways. 7
- (d) Write a note on USBR stilling basin. 7
3. (a) Define the weir and barrage. 2
- (b) Draw a neat layout of diversion head-work and explain the function of each part. 7
- (c) Explain the causes of failures of weirs on permeable foundations. 7
- (d) Explain the design procedure for Glacis weir. 7
4. (a) Define canal falls. 2
- (b) Describe the procedure of designing sarda fall. 14

Or

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- What are hydraulic gates? Describe different types of spillway gates with neat sketch.
5. (a) Define cross drainage work. 2
- (b) Explain Hind's method for the design channel transition. 14

Or

Discuss the design consideration for aqueduct.