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Name of Examination : **Winter 2020** - (Preview)

Course Code & Course Name : **CE301U - Dams and Hydraulic Structures**

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Maximum Marks : **60**

Duration : **3 Hrs**

[Edit](#) [Print](#) [View Answer Key](#) [Close](#) **Answer Key Submission Type:** Marking scheme with model answers and solutions of numerical

Instructions:

1. All questions are compulsory.
2. Illustrate your answer with suitable figures/sketches wherever necessary.
3. Assume suitable additional data; if required.
4. Use of logarithmic table, drawing instruments and non programmable calculators is allowed.
5. Figures to the right indicate full marks.

1) a) Explain types of failure of earthen dam and give their remedial measures. [10]

Attempt any one from 1b & 1c

1) b) Define spillway. State the necessity and location of emergency spillway. [5]

c) State the component of weir with their functions. [5]

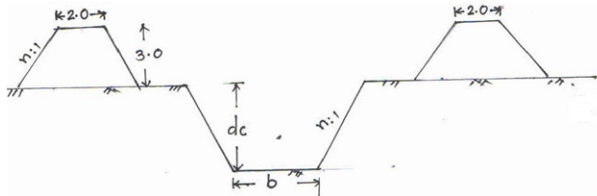
2) a) What is earthen dam & explain of failure of earthen dam with neat sketch [10]

Attempt any one from 2b & 2c

2) b) State advantages of canal lining. [5]

c) . Define gravity dam. Differentiate between earthen dam and gravity dam [5]

3) a) Calculate the balancing depth for a channel section having a bed width equal to 18m and side slope of 1:1 in cutting and 2:1 in filling. The bank embankments are kept 3.0m higher than the ground level and crest width of bank is kept as 2.0m. [10]



Attempt any one from 3b & 3c

3) b) Define rate of silting and enlist factors affecting silting of reservoir. How does it affect dam storage. [5]

c) List various types of spillways and explain Ogee spillway with a sketch. [5]

4) a) Draw labeled diagram of canal cross section in cutting. State the necessity of providing: [12]

- (i) Canal Escape (ii) Canal Falls and Rapids (iii) Cross Regulator (iv) Canal Outlets

Attempt any one from 4b & 4c

4) b) Draw the neat sketch of gravity dam with usual notation. [3]

c) State the important points to be considered while fixing the alignment of canal. [3]

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