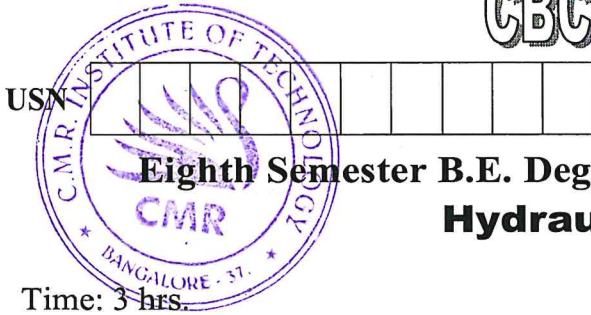


CBCS SCHEME



15CV832

Eighth Semester B.E. Degree Examination, July/August 2021 Hydraulic Structures

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions.

- 1 a. What forces act on gravity dam? Explain with help of diagram. (10 Marks)
b. What is a Drainage gallery? What methods are employed for calculating the reduction in uplift force? (06 Marks)
- 2 a. What is an elementary profile of a gravity dam? What modifications are made to make it practical profile? (08 Marks)
b. Brief out design of low gravity dam. (08 Marks)
- 3 a. What are the various causes of failure of an earth dam? Explain with the help of neat sketch. (12 Marks)
b. What are the advantages and limitations of earth dam? (04 Marks)
- 4 a. What are the criteria for safe design of earth dam? (08 Marks)
b. Explain the phreatic line in earth dams with filters. (08 Marks)
- 5 a. Draw neat diagram of Ogee spillway and explain its design criteria. (10 Marks)
b. Explain energy dissipation method to protect the stream bed below spillway. (06 Marks)
- 6 a. Write a brief note on Khosla's theory of design of weir on permeable foundation. (08 Marks)
b. List the limitations of Bligh's Creep theory. (08 Marks)
- 7 a. What is meant by Cross drainage work? Describe with the help of neat sketch various types of cross drainage work. (12 Marks)
b. Write a note on Inlet and Outlet. (04 Marks)
- 8 a. Explain the Design consideration for aqueducts. (12 Marks)
b. Write a note on level crossing. (04 Marks)
- 9 a. What is an Canal outlet? Write the requirement of a good outlet. (06 Marks)
b. What are the different types of outlets? (10 Marks)
- 10 a. What is a fall in a canal? Why it is necessary to provide a fall in a canal? (06 Marks)
b. Describe briefly with neat sketch, the different type of falls (any four types). (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.