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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Civil Engineering) (2012 to 2017) (Sem.-7)

FLOOD CONTROL & RIVER ENGINEERING

Subject Code : BTCE-816

M.Code : 71875

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**1. Answer briefly :**

- a. Define the term 'probable maximum flood'.
- b. Define Bed Material Load.
- c. Mention the suitability of the rational formula and unit-hydrograph method of flood estimation.
- d. Define stream power.
- e. Mention two advantages of physical river model over mathematical model.
- f. What are the two governing equations need to be solved for mathematical river model for flow hydraulics?
- g. What is the basis of flow resistance in a river?
- h. Name the methods available to protect riverbanks from erosion.
- i. Define cut-off ratio.
- j. Write two objectives for river training works.

SECTION-B

2. Describe the rational method of flood peak estimation. In this context discuss the method to estimate time of concentration.
3. Classify the river training and describe them.
4. Discuss the concept of regime. In this context, describe the Lacey's A regime theory.
5. Describe the marginal embankment method of river training.
6. Describe the various methods of river channel improvement.

SECTION-C

7. What is river meandering? Describe the various causes of river meandering.
8. Describe flood control in Indian context and associated economics with flood control.
9. What is form resistance in river channel? Describe various bed forms its occurrence and its resistance to flow.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.