

BHARTIYA INSTITUTE OF ENGINEERING & TECHNOLOGY, SIKAR
DEPARTMENT OF CIVIL ENGINEERING
QUESTION BANK
SUBJECT= WATER RESOURCES ENGINEERING-II

1. Design a sarda type fall for a canal & draw neat sketch for the following data:-

- I. Discharge $\frac{U/S}{D/S} = \frac{15 \text{ cumecs}}{15 \text{ cumecs}}$
- II. Full supply level $= \frac{U/S}{D/S} = \frac{201.5}{200.00}$
- III. Drop = 1.5 m
- IV. Bed level $= \frac{U/S}{D/S} = \frac{200.00}{198.50}$
- V. Bed width $\frac{U/S}{D/S} = \frac{10.0 \text{ m}}{10.0 \text{ m}}$
- VI. Full supply depth $\frac{U/S}{D/S} = \frac{1.50 \text{ m}}{1.50 \text{ m}}$

Bligh's creep coefficient = 9. Use Bligh creep theory.

- 2. Explain different types of classification of canal falls with neat sketches.
- 3. Describe the necessity of providing a canal fall. What are the factor to be considered while deciding the location of a fall?
- 4. Compare Bligh & khosla theory.
- 5. Draw a neat diagram for a diversion headwork and explain the component parts.
- 6. Describe various forces acting on gravity dam with suitable sketches
- 7. Describe various types of failures of earth Dam.
- 8. Describe the site selection for a Dam.
- 9. A masonry dam 6m high is 1.5m wide at top & 4.5m wide at bottom, with vertical water face. Determine the normal stresses at toe & heel for reservoir empty & full condition. Take $W_c = 2.4 \text{ g/cc}$ & $C = 1$. Assume suitable data.
- 10. What is spillway? Describe any three types of spillway with sketches.
- 11. What is spillway gates? And explain any three types of spillway gates
- 12. What do you understand by computer aided irrigation design?
- 13. Write short note on water shed management.
- 14. Describe the various optimization techniques