PVP 14

Code: CE6T3

III B.Tech-II Semester–Regular/Supplementary Examinations–March 2019

WATER RESOURCES ENGINEERING-II
(CIVIL ENGINEERING)

Duration: 3 hours Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1. a) Draw and show components of Diversions Head Works.
   b) Write the main functions of Upstream and Downstream sheet piles.
   c) Enumerate the factors involved in selection of site for dam.
   d) Show various storages in reservoir in a neat diagram.
   e) Write the reasons for causes of failures of earth dams.
   f) Discuss about the launching aprons.
   g) Differentiate trapezoidal notch fall and straight glacis fall.
   h) Provide complete list of canal modules.
   i) Define aqueduct and draw neat sketch.
   j) Define 'Factor of Safety'.
   k) Write causes of failure of a gravity dam.

PART – B

Answer any *THREE* questions. All questions carry equal marks.

3 x 16 = 48 M

2. Describe the Bligh's creep theory and Khosla's theory mentioning advantages and modifications over each other. 16 M

3. a) The yield of runoff in Mm^3 from a catchment area during each successive month is given in the below table: 8 M

1	2	3	4	5	6	7	8	9	10	11	12
1.4	2.1	2.8	8.4	11.9	11.9	7.7	2.8	2.52	2.24	1.96	1.68

Determine the minimum capacity of reservoir required to allow the above volume of runoff to be drawn off at a uniform rate assuming that there is no loss of water over spillway.

b) Discuss in detail about the types of reservoirs and reservoir yield. 8 M

4. a) Explain in details about the safe design criteria for earthen dams. 5 M

b) Describe any six types of spill ways, advantages and disadvantages with neat figures. 6 M

c) Describe the functions of stilling basins. 5 M

5. a) Describe about the design principles of Straight Glacis fall. 8 M

b) Give complete classification of canal outlets and canal modules and discuss about them in detail. 8 M

6. a) Explain how to select site for cross drainage works. 4 M

b) Describe the design principles of Syphon aqueduct. 6 M

c) Differentiate aqueduct and super passage with neat figures. 6 M