PVP 12

Code: CE6T3

III B.Tech - II Semester – Regular Examinations – April 2016

WATER RESOURCES ENGINEERING-II
(CIVIL ENGINEERING)

Duration: 3 hours Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. Describe with the help of suitable sketches Bligh's creep theory for the safe design of apron in an irrigation work. 14 M

2. a) Discuss the requisites of good sites for various types of dams. 7 M

   b) What do you understand by mass curve? Explain the method for determining safe yield from a reservoir of given capacity using mass curves. 7 M

3. Design a suitable section for the overflow portion of a concrete gravity dam having the d/s face sloping at 0.7H: 1V. The design discharge for the spillway is 8000 cumecs. The height of the spillway crest is kept at RL 204.0m. The average river bed level at the site is 100.0m. The spillway length consists of 6 spans having a clear width of 10m, each. Thickness at each pier may be taken as 2.5m. 14 M

4. Describe with neat sketches the various seepage control measures through:

   a) Body of earthen dam 7 M

   b) Foundation of earthen dam. 7 M

5. a) Mention different types of spillways. Also mention different types of gates used on spillways. 6 M

   b) Discuss the salient features that affect the hydraulic design of an Ogee spillway with the help of relevant sketches. 8 M

6. a) Why do we provide a fall on canal? Enumerate different types of falls. 7 M

   b) Data refer to fall site, full supply discharge us/ds = 50 cumecs, bed width u/s/d/s = 28.0 m, full supply level u/s/d/s=150.00/148.50, bed level u/s/d/s = 148.00/146.50 m. What type of fall would you recommend for this canal? Design cistern of fall? 7 M

7. a) State briefly how you will fix up the location and capacity of canal outlet. 7 M

   b) State requirements for an ideal outlet. Distinguish between a modular, a non- modular and a semi-modular outlet. Give on example of each type. 7 M

8. a) What is a level crossing? Describe various level crossings? 7 M

b) Explain the design principles of an aqueduct. 7 M