**QUESTION BANK**

**CE6703 WATER RESOURCES AND IRRIGATION ENGINEERING**

**ANNA UNVERSITY CHENNAI NOV/DEC-2016**

**UNIT I - WATER RESOURCES**

**PART A**

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| 1. What are the uses of socio-economic data in water resource planning? 2. Define resesrvoir. 3. Define metrology. 4. Discuss the term Reservoir operation 5. Differentiate b/w consumptive and non – consumptive use of water. 6. Discuss the term Reservoir operation 7. Classify the various zones of storage in a reservoir. 8. List out the formula for estimating flood peak based on area. 9. Write down the steps for Water Resources planning.   How do you fix a capacity of reservoir? |
| **PART B**   1. How will you fix the capacity of reservoir? Explain. 2. What are the various types of data required for water   resources planning and development.explain and details.   1. How will you fix the capacity of reservoir? Explain. 2. Illustrate the importance of design flood in the design of levees and flood walls. 3. Briefly explain about water resources in India and Tamil Nadu. 4. Write short note on single and multipurpose reservoir with its advantages and disadvantages.   **UNIT II - WATER RESOURCE MANAGEMENT**  **PART A**   1. What is the Need for National Water policy? 2. Define water budget. 3. List out any 4 important river basins in India. 4. Describe about basin. 5. Distinguish b/w consumptive use and Delta 6. Enumerate the equation for determination of consumptive use? 7. Discuss the different methods to measure consumptive use. 8. State the principles of Master Plan. 9. Define National Water policy. 10. List out the factors affecting the consumptive use of water.   **PART B**   1. What is the Necessity of National Water Policy? Explain 2. Define Master Plan in water resources? Explain the scope and aims in detail. 3. Write briefly about water budget and its development plan. 4. What is the concept of basin as a unit for development? 5. Discuss about the economics of water resource planning.   **UNIT III - IRRIGATION ENGINEERING**  **PART A**   1. Define irrigation. 2. Define duty. 3. List out the Factors Affecting consumptive uses of water? 4. Differentiate b/w kharif crops & rabi crops? 5. Define delta of a crop and crop ratio. 6. Illustrate the methods for improving duty 7. Write a note on effective rainfall. 8. Enumerate the possible disadvantages of Irrigation. 9. Distinguish between the gross command area and culturable command area? 10. Write short note on (i) Crop Period (ii) Rotation Period   **PART B**   1. After how many days will you supply water to a clay loam soil in order to ensure   (a)efficient irrigation of the given crop, if  (b)Field capacity of the soil is 27%  (c) Density of soil is 1.5gm/cc  (d) Effective depth of root zone is 75cm and  (e) Daily consumption use of water for the give crop is 11mm   1. Explain in detail about irrigation efficiencies. 2. With a neat sketch, explain the modes of applying water to Crops. 3. Illustrate the methods to measure the consumptive use of water? Explain 4. Explain crops seasons and crop water requirement.   **UNIT IV - CANAL IRRIGATION**  **PART A** |
| 1. What is meant by canal drop? 2. What is an aqueduct? 3. What are the advantages of requlators to weirs? 4. Define critical velocity with neat sketch 5. Name few dams located in india. 6. Define critical velocity ratio. 7. Define canal outlets. 8. Define the term canal head work. 9. Differentiate b/w weir and barrage 10. What is meant by canal escape?.   PART B   1. Explain the various components of diversion head work. 2. Explain the kennedy”s and lacey’s theories of canal design. 3. Explain canal lining and canal outlets. 4. Explain canal drop and cross drainage work with neat sketch. 5. kennedy”s and lacey’s problems 6. Explain various forces acting on a gravity dam. 7. (i)Explain the classification of dams with examples.   (ii)Discuss about the points to be considered for selection of site for a dam.   1. Explain the types of canal escapes with neat sketches and list   the factors to be considered in the alignment of canal.  **UNIT V - IRRIGATION METHODS AND MANAGEMENT**  **PART A**   1. Differentiate b/w surface and sub-surface irrigation. 2. Discuss the term irrigation management. 3. State any two merits of irrigation. 4. Explain the term water distribution. 5. Enumerate the possible disadvantages of irrigation. 6. Write any case studies in participatory irrigation management. 7. Classify the various types of irrigation. 8. List out the factors considered in irrigation scheduling. 9. Describe about irrigation management in India and Tamil nadu. 10. Differentiate tank and well irrigation.   PART B   1. Briefly explain about irrigation management in India and Tamil Nadu. 2. Write short note on tank and well irrigation with its advantages and   Disadvantages.   1. Explain in detail about the methods of Surface and Sub-Surface irrigation. 2. Write in detail about i) lift irrigation and ii) tank irrigation. 3. How will you format irrigation scheduling? Explain. 4. What kinds of participation are necessary for irrigation management activities?     PREPARED BY E.VENKATESAN/8208/EGSPEC |
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