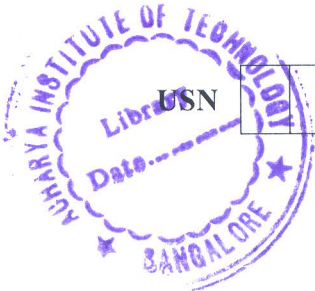


CBCS SCHEME

15CV661



Sixth Semester B.E. Degree Examination, June/July 2019 Water Resource Management

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Write a detailed note on availability of 'Global Water Resources' and distribution of 'Global Fresh Water'. (08 Marks)
- b. Explain 'Major', 'Medium' and 'Minor' water basins in India and list a minimum of six major water basins identified in our country. (08 Marks)

OR

- 2 a. Explain water balance equation and its importance. (08 Marks)
- b. Explain the process of 'Hydrologic Cycle' along with representative diagram. (08 Marks)

Module-2

- 3 a. Explain in detail the necessity of water resources planning and management. (08 Marks)
- b. Write a detailed note on post planning and management issues to be addressed in case of a river valley development project. (08 Marks)

OR

- 4 a. What are the planning and management aspects in case of water resource development project? (06 Marks)
- b. Explain in detail the following:
 - i) Top-down approach of water resource planning and management.
 - ii) Demand based bottom-up approach of water resource management. (10 Marks)

Module-3

- 5 a. Analyze the four basic principles of "Integrated Water Resources management" recommended as per Dublin's International conference on 'Water and Environment' (1992). (10 Marks)
- b. Comment on the 'Role of Government' in providing 'Enabling Environment' for achieving integrated water resource management in our country. (06 Marks)

OR

- 6 a. Bring out the advantages/disadvantages of private sector involvement in the field of water resources management. (08 Marks)
- b. Explain the process of 'integrated water resources management' involving integration of natural water system and human system. (08 Marks)

Module-4

- 7 a. Elaborate the salient features included in the 'National Water Policy (2002)' and discuss the water sector reforms needed to be adopted in India. (10 Marks)
- b. Discuss the role of 'Water user associations' and its effectiveness for effective water governance and management of water resources. (06 Marks)

OR

- 8 a. Write a detailed note on existing legal framework for water and constitutional provisions for water usage by the citizens of India. (08 Marks)
- b. Elaborate the role of local institutions and its importance for good water governance. (08 Marks)

Module-5

- 9 a. Define the term 'Rain Water Harvesting'. Elaborate Rural technological systems being adopted for water conservation. (08 Marks)
- b. Explain the design principles for small water harvesting structures for a micro catchment. (08 Marks)

OR

- 10 a. What is ground water recharge? With neat sketches explain
i) Basin method and ii) Pit method of Ground Water recharge. (10 Marks)
- b. Explain the importance of water harvesting and conservation along with basic principles involved in the process. (06 Marks)

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