



USN

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|

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)

* * * * *