

# CBCS SCHEME

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15CV661

Sixth Semester B.E. Degree Examination, June/July 2018

## Water Resources Management

Time: 3 hrs.

Max. Marks: 80

**Note:** Answer FIVE full questions, choosing one full question from each module.

### Module-1

- 1 a. With a sketch, explain hydrologic cycle. (08 Marks)  
b. Give a summary on global water resources and Indian water resources. (08 Marks)

OR

- 2 a. With a sketch, explain confined and un-confined aquifer. (08 Marks)  
b. What is water scarcity? Summarize the contributing factors of water scarcity. (08 Marks)

### Module-2

- 3 a. Explain the necessity of water resources planning and management. (08 Marks)  
b. Explain the spatial and temporal scales of planning and management. (08 Marks)

OR

- 4 a. With a typical analytical frame work for water resources management studies, explain inception, development and selection phases. (08 Marks)  
b. Summarize the questions addressed in adaptive integrated policy an activities of water resources planning and management. (08 Marks)

### Module-3

- 5 a. With a sketch showing the components, explain the principles of integrated water resources management (IWRM). (08 Marks)  
b. Explain the guiding principles : Dublin statement and Rio declaration of integrated water resources management. (08 Marks)

OR

- 6 a. With a figure of three pillars: Economic efficiency, equity and environmental sustainability, explain the implementation process of IWRM. (08 Marks)  
b. Summarize the sectors benefited by IWRM. (08 Marks)

### Module-4

- 7 a. Explain the existing legal framework and constitutional provisions for water in India. (08 Marks)  
b. Explain the various deficiencies in the existing legal framework of water resources development in India. (08 Marks)

OR

- 8 a. Summarize the salient features of Indian National Water Policy 2012. (08 Marks)  
b. Summarize the scope of Water User's Association (WUA) and list it's functions. (08 Marks)

### Module-5

- 9 a. What is rainwater harvesting? Explain the needs for rainwater harvesting. (08 Marks)  
b. Explain the different types of lining done to control seepage in Ponds. (08 Marks)

OR

- 10 a. What is Percolation tank? Describe the general guidelines to be followed in proposing a percolation tank. (08 Marks)  
b. Briefly explain the various techniques of rain water harvesting in urban area. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.