SEAT No. :

P3338

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[5254]-510

B.E. (Civil)

INTEGRATED WATER RESOURCES PLANNING AND MANAGEMENT

(2012 Pattern) (Elective - II) (Semester - I)

Time : 2½ Hours]   *[Max. Marks : 70*

Instructions to the candidates:

1)   *Answer any one from questions 1 or 2, 3 or 4, 5 or 6, 7 or 8, 9 or 10, 11 or 12.*

2)   *Neat diagrams must be drawn wherever necessary.*

3)   *Figures to the right indicate full marks.*

4)   *Assume Suitable data if necessary.*

Q1) a)   Write a note on: History of water resources development.   **[3]**

     b)   Write a note on: Scope for privatization.   **[3]**

OR

Q2) a)   Present framework for water management in your institute.   **[3]**

     b)   What is meant by riparian rights?   **[3]**

Q3) a)   Write a note on: Principles of water allocation.   **[3]**

     b)   Write a note on: Concept of 'blue water' and 'green water'.   **[3]**

OR

Q4) a)   Write a note on: Financing of water resources project.   **[3]**

     b)   Write a note on: Requirement of water for human and nature.   **[3]**

Q5) a)   What is meant by export of water?   **[4]**

     b)   What is meant by severity index?   **[4]**

OR

Q6) a)   What are the measures to control water logging?   **[4]**

     b)   How to do the assessment of flood damage?   **[4]**

Q7) a) Explain in detail necessity of water management in irrigation sector. **[8]**

b) What is hydropower sector water demands? Explain how it is estimated.**[8]**

OR

Q8) a) What are consumptive and non-consumptive demands? Explain in detail,**[8]**

b) Write a note on estimation and forecasting of water demand for irrigation sector. **[8]**

Q9) a) Write a note on: Social impact of water resources development. **[8]**

b) Social impact of water resources development on industrial growth to enhance living standards. **[8]**

OR

*Q10)*a) How to protect the vital ecosystem by environmental management? **[8]**

b) Write Social impact of water resources development on management of rehabilitation & resettlement. **[8]**

*Q11)*a) How the management of IWRM is carried out by use of data driven techniques like Genetic programming is done. **[8]**

b) Write a note on: **[10]**
   i) Contour Bunding
   ii) Strip Cropping
   iii) Bench Terracing
   iv) Check Dams.

OR

*Q12)*a) Define watersheds. How the watersheds are classified? Explain integrated approach for watershed management. **[8]**

b) Define RS & GIS. Write a role of RS & GIS in watershed management.**[10]**

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