Total No. of Questions : 12]

SEAT No. :

P2044

[Total No. of Pages : 2

[4859]-1010
B.E. (Civil)
Integrated Water Resources and Planning
(Elective - II) (Semester - I) (2012 Pattern) (Endsem)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answer any one from questions Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10, Q11 or Q12.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitalbe data, if necessary.***

Q1) a) Write a note on "World water resources". **[3]**

b) Comment on "water infrastructure-problems and perspectives" **[3]**

OR

Q2) a) Explain in brief "water as finite resource". **[3]**

b) Write a note on "Riparian rights". **[3]**

Q3) a) Explain water laws and constitutional provision for water management. **[3]**

b) Write a note on "water scarcity". **[3]**

OR

Q4) a) Explain - Benefit cost analysis. **[3]**

b) What are the global and national perspectives of water crisis? **[3]**

Q5) a) Explain "inter basin water transfer". **[4]**

b) Explain "Water management in irrigation sector". **[4]**

OR

Q6) a) Write note on

i) Flood damage assessment

ii) Severity index **[4]**

b) What is the use of geoinformatics in management of flood? **[4]**

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Q7) a) What is navigation and recreational water demands? Explain how it is estimated. **[8]**

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

OR

Q8) a) Explain in detail necessity of water management in irrigation sector. **[8]**

b) What are consumptive and non consumptive demands? Explain in detail. **[8]**

Q9) a) What is "Decision support system for Integrated Water Resources Management (IWRM)" **[8]**

b) Write a note on "Protection of vital ecosystem". **[8]**

OR

Q10)a) What are the direct and indirect social impacts of water resources development? **[8]**

b) Write note on

i) Minimum Flow

ii) Water quality management. **[8]**

Q11)a) Write note on role of RS and GIS in watershed management. **[8]**

b) Explain in short about the two terms:

i) Genetic programming and

ii) Model Tree in water resources planning. **[10]**

OR

Q12)a) Explain data driven techniques in Artificial Neural Networks related to watershed management. **[8]**

b) How watershed are classified? Explain integrated approach for watershed management. **[10]**