

B.Tech. Civil (Water Resources Engineering)

Term-End Examination

December, 2006

ET-534(C) : WATER RESOURCES PLANNING

Time : 3 hours

Maximum Marks : 70

Note : *Attempt any **seven** questions. Use of calculator is permitted.*

1. Explain the land irrigability classification of soil. Also explain the ill-effects of land degradation and suggest remedial measures for its improvization. 10

2. (a) Briefly explain the need for inter-basin water transfer schemes. 5
(b) Explain the reasons for gap between irrigation potential created and its utilization. 5

3. Distinguish between :
 - (a) Recharge and Infiltration 4
 - (b) Ground water and Soil water 3
 - (c) Evaporation and Evapotranspiration 3

4. Define future population. Also discuss briefly different methods of population forecasting giving their salient features. Also comment, which method is commonly used and why. 10
5. (a) Discuss causes and consequences of population explosion. 5
(b) Enlist various methods used for disinfecting public water supply and describe any one of them. 5
6. (a) State and explain the hierarchy levels in planning water resources projects. 5
(b) Explain conjunctive use of surface water and ground water. 5
7. (a) What are the steps needed in identifying training needs of personnel in an organization ? 5
(b) Explain briefly the importance of induction training. 5
8. (a) Describe the role of environmental impact indices in water resources project. 5
(b) Explain modelling of water resources project. 5
9. (a) Discuss different forms of project organization. 5
(b) Discuss the importance of techno-economic feasibility study of a project. 5
10. Define flood routing. Explain about reservoir routing. Also discuss Modified Pul's method of reservoir routing. 10