

Date: 12/05/2016.

Student Exam No. _____

GANPAT UNIVERSITY

B. Tech. Semester: VIII (CIVIL) Engineering

Regular Examination April – June 2016

2CI809 – WATER RESOURCES ENGINEERING-II

Time: 3 Hours

Total Marks: 70

- Instruction: 1. Assume Suitable Data, if necessary.
2. Figure to the Right indicates Full Marks.

Section – I

- Que.1 (A) What do you mean by 'Water Resources Systems Engineering'? State the characteristics of system analysis. 6
(B) Explain the general steps in 'System Approach'. 6

OR

- Que. 1 (A) Define 'Economic Analysis' and state the economic objective function for comparing the alternative plans. 6
(B) State the different discounting formulas and factors. 6
Que. 2 (A) Define and differentiate the terms 'Simulation' and 'Optimization'. 6
(B) Write short note on 'stratification of a large reservoir pool'. Draw neat sketch. 5

OR

- Que. 2 (A) Define 'Benefits' and 'Costs'. State various considerations of Benefit to cost analysis of 'Water Resource Projects'. 6
(B) Explain the considerations for cost estimation of Municipal water Supply. 5
Que. 3 Answer the Following. 12
(A) Explain the term 'Sustainable Water Resources Development'. What is its necessity?
(B) What is 'Green House Effect'? List the major gases responsible for the effect and state their origin and effects.
(C) Write limitations of 'Linear Programming'.

Section – II

- Que. 4 (A) Give classification of hydrological models. 6
(B) Explain: Characteristics of Surface water. 6

OR

- Que. 4 (A) Explain "Watershed Characteristics". 6
(B) Write short note on "Calculation required for sizing subsurface system". 6
Que. 5 (A) Explain method for designing detention basin. 6
(B) Write a note on "General procedure for direct monitoring of flood damage". 5

OR

- Que. 5 (A) Discuss in brief methods for finding out flood discharge. 6

(B) Write short note on quality of ground water.

5

Que. 6 Answer the Following.

12

- (A) What is sedimentation? Explain its considerations in reservoir planning. State in brief the measures to reduce its menace.
- (B) Define the term 'Water Right'. Discuss the surface water rights and ground water rights.
- (C) Write a short note on 'Ecosystem management'.

END OF PAPER