

Code: CE8T4C

**IV B.Tech - II Semester – Regular / Supplementary Examinations  
May 2022**

**WATERSHED MANAGEMENT  
(CIVIL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

**PART – A**

Answer *all* the questions. All questions carry equal marks

11 x 2 = 22 M

1.

- a) Write the advantages of watershed management in India.
- b) Write any two objectives of watershed management.
- c) Explain about the effects of erosion on land fertility.
- d) Explain about brushwood dam used for controlling soil erosion.
- e) Differentiate form ponds and percolation tanks for rainwater harvesting.
- f) Give classification of land use and land capability.
- g) Explain about sustainable agriculture.
- h) Explain about Silvipasture.
- i) Enlist watershed management activities.
- j) Write a note on ICRISAT and its activities.
- k) Explain about climate change impact on watershed.

## PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Describe the integrated and multi-disciplinary approach for watershed management using some salient principles from various phases. 10 M
- b) Describe the following characteristics of watershed: shape, drainage, geology & soils. 6 M
3. a) Describe the ‘Universal Soil Loss Equation’ for estimating the soil erosion. 10 M
- b) Describe the following methods to control the soil erosion: gully control, rock fill dams and Gabion using figures wherever applicable. 6 M
4. a) Describe in detail about the catchment harvesting and soil moisture conservation methods with figures. 8 M
- b) Explain in detail about the land management of forest, agriculture, grass land and wild land. 8 M
5. a) Describe in detail about the methods of crop husbandry, soil enrichment, inter, mixed and strip cropping. 10 M

b) Describe briefly any 3 methods of dry land agriculture. 6 M

6. a) Write the various participative roles of people in effective management of any watershed in India. Support your answer with one case study. 8 M

b) Describe in detail about the various components involved in preparation of action plan for effective watershed management. 8 M