

Code: CE8T4C

**IV B.Tech - II Semester – Regular / Supplementary Examinations  
March 2019**

**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) What is concept of Watershed development?
- b) What do you understand by term” Integrated watershed management”?
- c) What is significance of time of concentration in watershed Management?
- d) Differentiate between evaporation and Transpiration.
- e) Write Universal soil loss equation. Explain its terms.
- f) What are components of a Rainwater harvesting system?
- g) Define farm ponds.
- h) What is meant by sustainable agriculture?
- i) Explain the concept of silvi pasture.
- j) Define ICRISAT.
- k) What are practical problems of watershed program?

## PART – B

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

3 x 16 = 48 M

2. a) What do you understand by water shed development?  
Explain the various approaches to be maintained for water shed management? 8 M
- b) Explain the various characteristics of watershed with neat sketches. 8 M
3. a) What are agents responsible for soil erosion? Explain the various control measures in Agricultural and non-Agricultural lands. 8 M
- b) Explain the effects of erosion on Land fertility and land capability. 8 M
4. a) Explain the land use pattern and Land management influence watershed management. 8 M
- b) What are rainwater harvesting structures in watershed?  
Explain any two structures with neat sketches. 8 M

5. What is meant by Bio-mass Management? Explain the following practices to improve biomass in watershed. 16 M
- (i) Land agriculture.
  - (ii) Silvi pasture.
  - (iii) Horticulture, social forestry and afforestation.
6. a) Explain the administrative procedures for sanction of watershed program from Government. 8 M
- b) Explain the role of people participation in planning, execution and operation of watershed. 8 M