

Government College of Engineering, Aurangabad
(An Autonomous Institute of Government of Maharashtra)
M.E. (Civil-Water Resources Engineering) Examination

End Semester Examination November-December 2016

CE 547: GIS Applications in Water Resources Engineering

Time: Three Hours

17 DEC 2016

Max. Marks: 60

“Verify the Course Code and check whether you have got the correct question paper”

N.B:-

1. All questions are compulsory
2. All questions carry equal marks
3. Assume suitable data if necessary and state it clearly
4. Use of non-programmable calculator is allowed

Q1. Attempt any TWO

- a) Differentiate between Raster data and Vector data.
- b) Explain application of GIS in water resource engineering.
- c) Discuss the procedure of rainfall runoff modeling using GIS

Q2. Attempt any TWO

- a) How we can use GIS in drought assessment and monitoring
- b) What is buffering? Explain with suitable example.
- c) Write short note on soil map and their use in GIS.

Q3. Attempt any TWO

- a) Explain step by step procedure of delineating the watershed.
- b) Explain Universal Soil Loss Equation (USLE) for estimation of soil erosion.
- c) What is SWAT? List out various application of SWAT in water resource engineering.

Q4. Attempt any TWO

- a) What are the models available for estimating sediment load? Explain any one in detail.
- b) What is catchment area treatment? Explain in brief.
- c) Write short note on integration of soil loss equation in GIS

Q5. Attempt any TWO

- a) Write short note on solid waste management. What is the role of GIS in solid waste management
- b) How urban storm water management studies can be carried out using GIS?
- c) Write down the procedure of extracting water body or parcel from google earth.
