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B.E / B.TECH (FULL TIME) DEGREE
End Semester Examinations, Nov/Dec 2012
Geoinformatics Branch
VI Semester

GI 9025 Remote Sensing and GIS for Hydrology and Water Resources
(Regulation 2008)

Time : 3.00 hrs

Max. Mark : 100

Answer all the Questions

PART – A

10 x 2 = 20

1. Define Hydrological Cycle?
2. Write short note on spectral properties of water.
3. What do you mean by watershed divide?
4. "Urban Hydrology" – Comment.
5. How will you estimate snow covered area using satellite data?
6. Define flood.
7. Distinguish between unconfined and confined aquifer.
8. Write short note on sea water intrusion.
9. Distinguish between storage and diversion system of irrigation.
10. Explain the methods of estimating reservoir siltation using Remote Sensing and GIS techniques.

PART – B

5 x 16 = 80

11. a. i) How will you develop a mathematical model for a ground water system using Remote Sensing and GIS? **16**

12. a. i) Draw a neat sketch of a Hydrological Cycle and indicate the various components. 8
- ii) How will you estimate the evapotranspiration using Remote Sensing and GIS? 8
- (or)**
- b. i) What do you mean by Morphometric Analysis? 2
- ii) Explain the methods of computing the various Morphometric parameter of a drainage basin. 14
13. a. i) Define Rainfall-runoff modelling. 2
- ii) How will you estimate runoff using Remote Sensing and GIS techniques? 14
- (or)**
- b. i) Explain the method of forecasting the flood using Remote Sensing and GIS. 8
- ii) How will you assess the flood damage using Remote Sensing and GIS? 8
14. a. i) Define drought. 2
- ii) What are the different methods of assessing the drought? 14
- (or)**
- b. i) What are the surface indicators that can be used for identifying ground water potential zone? 8
- ii) Write briefly water quality mapping and monitoring using Remote Sensing and GIS. 8
15. a. i) Write short note on conjunctive use of surface and ground water. 4
- ii) What are the different stages in the irrigation projects? Explain. 12
- (or)**
- b. i) Define sustainable development of watershed. 2
- ii) How will you assess the sustainable status of watershed using Remote Sensing and GIS? 14