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B.E., (Full Time) DEGREE END SEMESTER EXAMINATION, November/December 2012

GEOINFORMATICS ENGINEERING

SEVENTH SEMESTER (REGULATION 2008)

GI 9027 REMOTE SENSING AND GIS FOR ENVIRONMENTAL MONITORING

Time: 3 hr

Max. Mark: 100

Answer ALL Questions

Part – A (10 x 2 = 20 Mark)

1. Draw the spectral reflectance of clear and contaminated water.
2. A flat terrain is having a monthly average precipitation of 100 cm. Estimate its annual run off.
3. Differentiate contaminated and non contaminated soil with EMR responses.
4. List the types of pollutants emitted from mines.
5. Write about soil erosion and its types.
6. How will you identify stressed vegetation from satellite Images.
7. What is bio-monitoring of environment?
8. Write the criteria involved in selecting ground truth sites.
9. List the classification of air pollutants
10. What is inversion?

Part – B (5 x 16 = 80 Mark)

11. (i) Write in detail about RS and GIS applications in Fisheries. (8 marks)  
(ii) Explain about satellites and techniques used for sea surface temperature measurement (8 marks)

12. (a) (i) Discuss in details about demand of water and its break up (8 marks)  
(ii) Brief about characteristics of water and its standards (8 marks)

OR

- 12 b) What is the role RS and GIS in flood prediction and How will you estimate Run off? (16 marks)

- 13 a) (i) Explain about soil degradation assessment and reclamation using RS and GIS (8 marks)  
(ii) Write about soil formation. Draw soil classification diagram (8 marks)

(OR)

- 13 b) How solid waste disposal contaminates the soil? Explain about solid waste disposal site identification using RS and GIS (16 marks)

14. a) Write in detail about spectral reflectance from vegetated surface and Stress Monitoring. (16 marks)

(OR)

14. b) (i) Explain about Land Use-Land Cover Mapping (8 marks)

(ii) Brief about application of RS and GIS in Forest Conservation (8 marks)

15 a).(i) Write about Gaussian Dispersion model for air pollution dispersion (12 marks)

(ii) Find the maximum ground level concentration for the following data

Effective Stack Height	-	150m
Emission rate	-	1260g/sec
Wind speed at stack height	-	6 m/sec
$\sigma_y$	-	560 m
$\sigma_z$	-	535 m

(OR)

15. b) i) Discuss about Plume Behaviour (8 marks)

ii) Write short notes on Wind Rose and its importance in air pollution control (8 marks)