

Register Number: 15231007

Name of the Candidate: K. MADHUMITHA

3638

M.E. DEGREE EXAMINATION, 2016

(ENVIRONMENTAL ENGINEERING)

(THIRD SEMESTER)

ENVC-301: WATER QUALITY MODELLING

(Common with Part-Time)

(Elective)

November]

[Time : 3 Hours

Maximum : 75 Marks

Answer any FIVE questions

(5 × 15 = 75)

1. Briefly describe the iterative methodology adopted for solving the simultaneous linear equations. (15)
2. Briefly linear equations:
 - a) Simulation and optimization
 - b) Computer Aided Design in Modelling. (15)
3. Briefly describe the following:
 - a) ~~Molecular diffusion and Fick's law~~
 - b) Convective differential equation (7½×2=15)
4. Briefly describe the operational and optimization model used in river water quality studies. (15)
5. With neat sketches explain briefly any three types of lake model. (15)
6. Briefly describe the following:
 - a) Estuarine Hydraulics
 - b) Finite difference models (7½×2=15)
7. State and brief about the ground water hydraulics equations used in Ground water quality modelling. (15)
8. a) Describe the effect of ocean current on diffusion process.
b) Briefly describe the processes that occur in Marine environment, when the waste water has been directly discharged in to it. (15)

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(ENVIRONMENTAL ENGINEERING)

(THIRD SEMESTER)

ENVE-302: REMOTE SENSING AND GIS FOR
ENVIRONMENTAL APPLICATIONS

(Elective)

November]

[Time : 3 Hours

Maximum : 75 Marks

Answer any FIVE questions

(5 × 15 = 75)

1. Discuss in detail about the basic components of Remote sensing system.
2. Briefly explain about the three forms of interaction that can take place when energy strikes upon the surface.
3. Describe in detail the electromagnetic spectrum with neat sketch for remote sensing data.
4. Explain with neat sketch about the Raster data compression techniques.
5. Discuss in detail about the processing techniques involved in the satellite data processing.
6. Explain in detail the utilization of GIS in optimal rating of solid waste management.
7. Discuss in detail the data types used in Geographical Information System.
8. Explain in detail about the utilization of remote sensing and GIS techniques for urban storm water studies.
