Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **17CE3052** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ENVIRONMENTAL GEOTECHNOLOGY** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Summarize the process of Nitrogen cycle. | CO3 | 8 |
| b. | Explain the sources of soil pollution. | CO1 | 12 |
| (OR) | | | | |
| 2. | a. | Categorize the sources of solid wastes. | CO3 | 4 |
| b. | Summarize the process of Carbon cycle. | CO3 | 6 |
| c. | Judge the effect of soil pollutant interaction in geotechnical properties | CO3 | 10 |
|  |  |  |  |  |
| 3. | a. | State the relevance of preparation of feasibility report in site selection for landfill. | CO4 | 4 |
| b. | Explain the factors governing location criteria for landfill. | CO2 | 8 |
| c. | Describe the stability of landfills for the safe waste disposal. | CO2 | 8 |
| (OR) | | | | |
| 4. | a. | Summarize the application of rigid and flexible linersin solid waste management. | CO5 | 8 |
| b. | Illustrate the relevance of risk assessment for remediation of contaminated site. | CO6 | 12 |
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| 5. | a. | Discuss a case study regarding failure of foundation due to any pollutant. | CO5 | 8 |
| b. | Paraphrase the processes advection, diffusion and dispersion | CO3 | 12 |
| (OR) | | | | |
| 6. | a. | Define aquifer, aquifuge, aquitard, aquiclude with a neat sketch | CO3 | 5 |
| b. | Illustrate the process of sorption, ion exchange and biodegradation. | CO3 | 15 |
|  |  |  |  |  |
| 7. | a. | Explain process of vitrification of waste. | CO2 | 6 |
| b. | Recall the different mechanisms for stabilization of contaminated site. | CO2 | 14 |
| (OR) | | | | |
| 8. | a. | Explain Micro and macro encapsulation techniques | CO5 | 6 |
| b. | Summarize the current waste disposal techniques. | CO2 | 6 |
| c. | Discuss any case study regarding utilization of solid waste for soil improvement. | CO5 | 8 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Summarize the chemical and biological process of In situ remediation methods of contaminated soil. | CO6 | 20 |