

Code No: 138CF

**R16**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year II Semester Examinations, September - 2020**

**GEOENVIRONMENTAL ENGINEERING**

**(Civil Engineering)**

**Time: 2 Hours**

**Max. Marks: 75**

**Answer any Five Questions  
All Questions Carry Equal Marks**

---

1. Discuss in detail the scope of geoenvironmental engineering with clear illustrations.[15]
2. What are the types of soil pollution? Discuss the following soil pollution by  
(a) Industrial effluents and solid wastes (b) Agriculture and (c) Urban activities. [15]
3. Write the types of waste and discuss the following: (a) Agricultural waste,  
(b) Biodegradable waste, (c) Biomedical waste and (d) Chemical waste. [15]
- 4.a) What are the characteristics of solid waste?  
b) Discuss how waste characterization is done? [7+8]
- 5.a) What is contaminant transport? Write the factors that influence the movement of a  
contaminant through the groundwater system.  
b) Explain dispersion due to mechanical spreading and molecular diffusion. [8+7]
- 6.a) Discuss the following with respect to contaminant transport modeling (i) Advective  
flux and (ii) Diffusive flux.  
b) Discuss the volume related properties used in the contaminant transport. [8+7]
- 7.a) How contaminated sites are identified? Explain.  
b) Discuss the objectives of site remediation. [8+7]
- 8.a) What are the types of landfills? Discuss them with neat sketches.  
b) Discuss the considerations in the site selection for landfills. [8+7]

---ooOoo---