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Reg. No. .....

Name : .....

Eighth Semester B.Tech. Degree Examination, February 2021

08.807.12. Elective - V — GEO-ENVIRONMENTAL ENGINEERING (C)

(2008 Scheme)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions. Each question carries **5** marks.

1. Discuss on waste generation.
2. Explain on the geotechnical reuse of waste materials.
3. Write a short note on landfill capacity.
4. Discuss on geomembrane liners.
5. Write a short note on insitu permeability.
6. Discuss on thermal treatment of soil.
7. What are the differences between diffusive and dispersive flow in saturated soil media?
8. Write a short note on attenuation capacity of soil.

(8 × 5 = 40 Marks)

P.T.O.

PART – B

Module — I

9. (a) Explain in detail the changes occurring in waste dump and remedial measures for the same. **10**

   (b) Discuss in detail on the shear properties, temperature and pH of soild waste. **10**

OR

10. (a) Discuss in detail on compressibility and permeability of solid waste. **10**

    (b) Compare the geotechnical properties of municipal solid waste and thermal power plant waste. **10**

Module — II

11. (a) Sketch, label and explain a typical engineered landfill. **14**

    (b) Discuss in detail on selection and ranking of landfill sites based on sensitivity index. **6**

OR

12. (a) Write short note on leachate recirculation. **8**

    (b) Estimate the life of a landfill for a user population of 12,000, available area for landfill is 50000m^2. Water table is at 5 m below ground level. Height of landfill restricted to 6 m. Assume that soil occupies 20% of the compacted volume. Assume suitable data if required. **12**

Module — III

13. (a) Discuss on soil waste interaction. Also add a short note on atterbergs limit. **12**

    (b) Write a short note on soil washing. **8**

OR

14. Write short notes on :

    (a) Electrokinetic remediation of soil **10**

    (b) Bio remediation of soil. **10**

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