

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech.(Civil Engg.) (2016 Batch) (Sem.-1)

GEOENVIRONMENTAL ENGINEERING

Subject Code : MTCE-204

Paper ID : [74240]

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

- Q1. a) Discuss subsurface contamination, briefly. (8)
b) Estimate the life of a land landfill for a user population of 10,000, available area for landfill is 50,000 m². Water table is at 5m below ground level. Height of landfill is restricted to 8m. Assume that soil occupies 20% of the compacted volume. Assume suitable data if required. (12)
- Q2. With the help of a neat sketch describe the operational components of a landfill and state their functions. (20)
- Q3. Define containment transport; explain the process governing the transport of contaminant in saturated soil. (20)
- Q4. a) Enumerate the geotechnical problems due to soil -water environment interaction. (8)
b) Discuss factors affecting permeability and their evaluation. (12)
- Q5. a) Write steps for design of ash pond for a thermal power plant. (12)
b) Explain different types of liners with figures. (8)
- Q6. Explain geotechnical reuse of mining waste and coal ash waste material in Civil engineering. (20)
- Q7. Explain detection and remedial measures for control of subsurface contamination. (20)
- Q8. a) Explain the different remedial measures for old waste dump. (10)
b) Give regulations for contaminated site remediation as per IS. (10)