

Roll No.

Total Pages : 2

002606

May 2024

B.Tech. (Civil) VI Semester

Geo-Environmental Engineering (PEC-CED-303-1)

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART-A

1. (a) Define advection and dispersion. (1.5)
- (b) What is volatilization and sorption? (1.5)
- (c) What do you understand by stabilization of waste? (1.5)
- (d) Define embankment. (1.5)
- (e) What are slurry ponds? (1.5)
- (f) What are the uses of bentonite and cement in slurry? (1.5)
- (g) What do you understand by contamination? (1.5)
- (h) Define soil erosion. (1.5)
- (i) What is demolition waste? (1.5)
- (j) What is Biodegradation? (1.5)

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PART-B

2. (a) What are the sources and effects of subsurface contamination? (10)
(b) What are the geo-environmental soil characterizations? (5)
 3. (a) What do you understand by stabilization and modification of waste? (5)
(b) Explain various types of characteristics and cover characteristics of solid waste. (10)
 4. Explain embankment construction and planning and design aspects? (15)
 5. (a) What are the uses of geosynthetics in land-fills? (5)
(b) What do you understand by vertical barriers and cutoff walls also explain the construction features of barriers and cutoffs? (10)
 6. (a) Explain engineering properties and geotechnical reuse of waste materials? (10)
(b) How to detect and control the subsurface contamination? (5)
 7. What are the causes and factors that contributing to soil erosion also provide the control measures for soil erosion? (15)
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