

X



reviewer3@nptel.iitm.ac.in ▼

Courses » Geoenvironmental Engineering (Environmental Geotechnology); Landfills, Slurry Ponds &

Contaminated Sites    Announcements    **Course**    Ask a Question    Progress    Mentor    FAQ

# Unit 5 - Week 4

**Course outline**

---

**How to access the portal**

---

**Week 1**

---

**Week 2**

---

**Week 3**

---

**Week 4**

- Lecture 10 : Liners for Landfills - Part 1
- Lecture 11 : Liners for Landfills - Part 2
- Lecture 12 : Liners for Landfills - Part 3
- Lecture 13 : Liners for Landfills - Part 4
- Quiz : Assignment no. 4
- Assignment 4 solution

---

**Week 5**

## Assignment no. 4

The due date for submitting this assignment has passed.  
 As per our records you have not submitted this **Due on 2018-09-05, 23:59 IST.**  
 assignment.

1) A city produces 4000 tons per day of MSW this year (2018) and this goes to a landfill. The **1 point** population growth rate is 1.0%; how many million tons total waste would be produced over the period from 2018 to 2020 i.e. in 2018, 2019 and 2020 (3 years)? Assume no change in GDP.

- 6.0
- 2.6
- 4.4
- 1.8

**No, the answer is incorrect.**  
**Score: 0**

**Accepted Answers:**  
 4.4

2) The term double composite liner in landfills means: **1 point**

- Two liners of the same material lying one on top of the other
- Two single liners of different materials lying one on top of the other
- Two single liners with a drainage layer separating them
- Two composite liners with a drainage layer separating them

**No, the answer is incorrect.**  
**Score: 0**

**Accepted Answers:**  
 Two composite liners with a drainage layer separating them

3) The clay in geosynthetic clay liners (GCLs) usually comprises of: **1 point**

- Kaolinite

© 2014 NPTEL - Privacy & Terms - Honor Code - FAQs -



A project of



In association with



Funded by

Week 9

Week 10

Week 11

Week 12

ce De

**Accepted Answers:***Bentonite*

4) Composite liners also leak but the leakage is very low in comparison to clays alone or geomembranes alone. This is because leakage occurs: **1 point**

- Over very small area at very slow rate
- Over very large area at very slow rate
- Over very small area at very fast rate
- Very large area at very fast rate

**No, the answer is incorrect.****Score: 0****Accepted Answers:***Over very small area at very slow rate*

5) Indicate the range of thickness, in mm, of HDPE geomembranes used as liners for landfills: **1 point**

- 0.25 to 0.50
- 0.50 to 0.75
- 1.5 to 2.5
- 2.5 to 5.0

**No, the answer is incorrect.****Score: 0****Accepted Answers:***1.5 to 2.5*

6) Which type of liners are self-healing? **1 point**

- Clay liners
- Concrete
- Polymeric membranes
- Metal sheets

**No, the answer is incorrect.****Score: 0****Accepted Answers:***Clay liners*

7) The range of bentonite required in amended soil liners used at the base of landfills varies in the range: **1 point**

- 0.25 to 0.50%
- 0.50 to 1.50%
- 5 to 15%
- 20 to 30%

**No, the answer is incorrect.****Score: 0****Accepted Answers:***5 to 15%*

8) Double composite liners are used in: **1 point**

- Municipal waste landfills

- Canals
- Hazardous waste landfills
- Underground tanks

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*Hazardous waste landfills*

9) The advantage of flexible wall permeameter over rigid wall permeameter is:

**1 point**

- Low saturation
- No side wall leakage
- Application of flexible loading
- None of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*No side wall leakage*

10) Factors which affect performance of GCLs:

**1 point**

- Hydration
- Shrinkage
- Internal erosion
- All of above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*All of above*

[Previous Page](#)

[End](#)