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## Unit 4 - Week 3

### Course outline

#### How to access the portal

#### Week 1

#### Week 2

#### Week 3

- Lecture 11 :  
Triaxial and Pullout Test  
(unit?  
unit=23&lesson=24)
- Lecture 12 :  
Pullout Test  
(unit?  
unit=23&lesson=25)
- Lecture 13 :  
Sewn Seam Strength,  
Permittivity and Transmissivity  
(unit?  
unit=23&lesson=26)
- Lecture 14 :  
Hydraulic Properties and  
abrasion Test of geosynthetics

## Week 3, Assignment 3

The due date for submitting this assignment has passed. **Due on 2019-08-21, 23:59 IST.**  
As per our records you have not submitted this assignment.

1) If geosynthetic allows for adequate fluid flow with limited migration of soil particles across its plane over a projected service lifetime of the application under consideration, then this function of geosynthetic is called **1 point**

- Filtration
- Separation
- Drainage
- Fluid barrier

No, the answer is incorrect.

Score: 0

Accepted Answers:

*Filtration*

2) The transmissivity of a geotextile varies with **1 point**

- Contact surfaces
- Compressive stress
- Hydraulic gradient
- All of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

*All of the above*

3) The nonwoven geotextiles generally have **1 point**

- High permittivity
- High tensile strength

(unit?  
unit=23&lesson=27)

Lecture 15 :  
Endurance  
properties of  
Geosynthetics  
(unit?  
unit=23&lesson=28)

Download  
Videos (unit?  
unit=23&lesson=29)

**Quiz : Week 3,  
Assignment 3  
(assessment?  
name=45)**

Week 3,  
Assignment 3  
Solution (unit?  
unit=23&lesson=50)

Weekly  
Feedback (unit?  
unit=23&lesson=30)

#### Week 4

- High modulus of elasticity  
 None of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*High permittivity*

4) The permittivity has units of

**1 point**

- m/s  
 m<sup>2</sup>/s  
 m<sup>3</sup>/s  
 s<sup>-1</sup>

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*s<sup>-1</sup>*

5) Which one of the following tests can be used to evaluate the clogging resistance of geotextiles with cohesionless soils (having a hydraulic conductivity/permeability greater than  $5 \times 10^{-4}$  m/s) under unidirectional flow conditions? **1 point**

- Gradient ratio test  
 Hydraulic conductivity ratio test  
 Field jar test  
 None of the above

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*Gradient ratio test*

6) A geosynthetic tested for resistance to oxidation (temperature stability) should have the minimum percentage retained strength of **1 point**

- 10%  
 20%  
 35%  
 50%

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*50%*

7) The following geosynthetics are used as a drainage medium: **1 point**

- (A) Thick needle-punched nonwoven geotextiles  
(B) Geonets  
(C) Drainage geocomposites

The correct decreasing order of flow capability is generally

- (A), (B), (C)  
 (B), (A), (C)  
 (C), (A), (B)  
 (C), (B), (A)

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*(C), (B), (A)*

8) Permittivity and transmissivity of a geotextile in a typical field application are

**1 point**

- Constant for any flow conditions
- Constant for only laminar flow conditions
- Constant for only turbulent flow conditions
- Never constant for any flow conditions

No, the answer is incorrect.

Score: 0

Accepted Answers:

*Constant for only laminar flow conditions*

9) The construction-related failures of geosynthetic applications are caused mainly by **1 point**

- The loss of strength due to UV exposure
- The lack of proper overlap
- The high installation stresses
- All of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

*All of the above*

10) As per ASTM standard, specify the minimum % strength required for polypropylene and polyethylene geogrid to retain in the specimens after 500 hour of ultraviolet exposure. **1 point**

- 40%
- 50%
- 60%
- 70%

No, the answer is incorrect.

Score: 0

Accepted Answers:

*70%*