

# Unit 11 - Week 9

## Course outline

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## Assignment 9

The due date for submitting this assignment has passed.  
As per our records you have not submitted this assignment.

**Due on 2019-10-02, 23:59 IST.**

1) Drainage aids in

1 point

- a. Removal of excess water from land surface
- b. Control water table
- c. Both a and b
- d. None of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c.

2) The envelope around the drain pipe

1 point

- a) Prevents the entry of the fine particles into pipe.
- b) Provides a porous medium of high porosity around the drain.
- c) Reduces the head loss at the entry
- d) All of the above

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d.

3) Which of the following drainage system has the field drains join the collector at right angle

1 point

- a. Parallel grid system
- b. Herringbone system
- c. Random System
- d. Giridon system

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
a.

4) The type of water removed by sub-surface drains is

1 point

- a. Hygroscopic water
- b. Capillary water
- c. Runoff water
- d. Gravitational water

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d.

5) The pipes with larger open area will have \_\_\_\_\_ head loss than those with smaller open area.

1 point

- a. Higher
- b. half
- c. Twice
- d. Lower

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d.

6) In a subsurface drainage system, the peak discharge through tile drain under full flow condition is 800 lps. What is the diameter of the drain (in cm) considering the Manning's roughness coefficient as 0.02 and a drain bed slope of 1.5%

1 point

- a. 17-20
- b. 10-12
- c. 25-30
- d. 10-15

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
a.

7) What is the drainage coefficient (inches/day) of an area of 40 ha with the discharge capacity of  $0.5 \text{ m}^3/\text{s}$ ?

1 point

- a. 0.108
- b. 10.8
- c. 42.52
- d. 4.252

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
d.

8) If the horizontal hydraulic conductivity of four layers of a 2 m deep soil are 0.20, 0.15, 0.09 and  $0.25 \text{ m}^3/\text{m}^2/\text{h}$ , respectively and the depths of the four layers are 0.55, 0.4, 0.45 and 0.6 m, the resultant horizontal hydraulic conductivity of the soil column ( $\text{m}^3/\text{m}^2/\text{h}$ ) will be

1 point

- a. 0.534
- b. 1
- c. 0.18
- d. 0.69

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c.

9) Surface drainage planned for farm of 10 ha with 70% cultivated land and 30% pasture land to drain out irrigation tail-water and seasonal rainfall runoff. Maximum rainfall intensity at the site in 30 years record is 42 mm/h. Assuming the runoff coefficient for cultivated land as 0.5 and pasture land as 0.36, determine the design discharge capacity of the drain ( $\text{m}^3/\text{s}$ ).

1 point

- a. 0.18
- b. 1
- c. 0.534
- d. 0.69

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
c.

10) The highest water table depth of a 6 m impermeable layer is 1 m from the soil surface. The sub-surface tile drains were installed at 4 m depth from the soil surface. What is the effective hydraulic head for drainage (in meter)?

1 point

- a. 2
- b. 3
- c. 1
- d. 5

- a.  
 b.  
 c.  
 d.

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
b.