

Unit 8 - Week 6

Course outline

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- Lecture 26 : Irrigation Wells

- Lecture 27 : Aquifer Properties

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Assignment 6

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

Due on 2019-09-11, 23:59 IST.

- 1) Groundwater accounts for nearly _____ of freshwater resources of the world 1 point
- a. 1/3
b. 2/3
c. 1/4
d. 1/2
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
b.
- 2) Darcy's law is strictly valid when Reynolds number (R_p) is less than _____ 1 point
- a. 1
b. 15
c. 20
d. 25
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
a.
- 3) Yield per unit drawdown is the 1 point
- a. Specific capacity
b. Well yield
c. Transmissivity
d. Specific yield
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
a.
- 4) Hydraulic resistance is the property of _____ 1 point
- a. Confined aquifer
b. Unconfined aquifer
c. Leaky aquifer
d. Artesian aquifer
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
c.
- 5) Compacted rock without fractures is an example of _____ 1 point
- a. Aquifuge
b. Aquifer
c. Aquiclude
d. Aquitard
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
a.
- 6) An aquifer comprising of sand gravel has a porosity of 20%. A 1 m^3 volume of the aquifer yields 150 liters of water. What are the values of specific yields (in %) and specific retention (in %)? 1 point
- a. $S_y = 25 \%$ and $S_r = 5 \%$
b. $S_y = 5 \%$ and $S_r = 15 \%$
c. $S_y = 15 \%$ and $S_r = 5 \%$
d. $S_y = 10 \%$ and $S_r = 15 \%$
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
c.
- 7) The discharge from a fully penetrating well operating under the steady-state condition in a confined aquifer of 20 m thickness is 25 lps. The drawdowns observed at two observation wells located at 15 m and 200 m from the well are 2.8 m and 0.15 m, respectively. Determine the transmissibility (m^2/day) and the permeability (m/day) of the aquifer. 1 point
- a. 25-26 and 1.2-1.3
b. 3.3×10^5 and 3.6×10^4
c. 14-15 and 0.7-0.8
d. 335-337 and 16-18
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
d.
- 8) An unconfined aquifer covering an area of 30 ha has a hydraulic conductivity of 20 cm/day and specific yield of 15%. After a significant rainfall event, the amount of groundwater recharge contributed by the rainfall is 20000 m^3 . Assuming no abstraction and outflow of groundwater during the recharge period, what is the rise in the water table (in cm)? 1 point
- a. 0.44
b. 4.44
c. 44.44
d. 444.44
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
c.
- 9) In a falling head permeameter test, the initial head is 0.5 m. The head drops to 0.06 m in 15 min. Calculate the time required to run the test if a final head of 0.3 m is to be attained. 1 point
- a. 59-61 min
b. 57-58 min
c. 51-52 min
d. 45-46 min
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
a.
- 10) A 20 cm well completely penetrates an artesian aquifer. The length of the strainer is 15 m, assuming the radius of influence as 300 m. Find the percentage increase in the yield if the diameter of the well is double. 1 point
- a. 1 - 2
b. 19-20
c. 8 - 9
d. 11-12
- a.
 b.
 c.
 d.
- No, the answer is incorrect.
Score: 0
Accepted Answers:
c.