

24516

B. Tech. 7th Semester (Civil Engg.) F. Scheme

Examination, May-2017

GROUND WATER ENGINEERING

Paper-CE-453 F

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt five question in all. Question 1 is compulsory. Attempt one question from each section. All question carry equal marks.

1. Explain the following :

- (i) Infiltration
- (ii) Aquifer
- (iii) Leaky Aquifer
- (iv) Ditching
- (v) Dupit's assumption
- (vi) Silting of tube well
- (vii) Confined aquifer
- (viii) Specific retention.

$2\frac{1}{2} \times 8 = 20$

Section-A

- 2. Explain different properties of aquifer. And different type of Aquifer with diagram. 20
- 3. Explain different ground water exploration and method of investigation. 20

Section-B

- 4. Explain Thiem's equilibrium formula for unconfined and confined aquifers. 20

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5. What do you understand by spherical flow ? Why this type of flow is not used in practical ? 20

Section-C

6. Explain different parameter for design of tube well. 20
7. What do you mean by well sickness and also explain different method to remove well sickness. 20

Section-D

8. (a) What do you mean by artificial recharge and what are different favourable condition of artificial recharge ? 10
- (b) What are the various spreading method of artificial recharge ? 10
9. Write short note on the following :
- (a) Induced infiltration
- (b) Recharge pits
- (c) Flooding
- (d) Recharge well. 4×5=20

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