

GATE 2024 Question Paper Feb 4 (Civil Engineering - Slot 2)

Ques 1. What will be relative density?

M = 0.5 percentage of air voids

$\gamma_{\min} = 1.3 \text{ gm/cc}$

$\gamma_{\max} = 1.8 \text{ gm/cc}$

Ans. 0.133 (assuming porosity = 0.5)

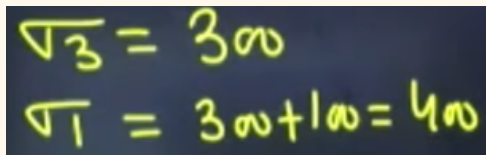
Ques 2. Find RL of R?

RL of P [BM = 200.000]

Point	Staff readings Back side	Staff readings Fore side	Remarks
P	-2.050	-	200.000
Q	1.050	0.95	Change point
R	-	-1.655	-

Ans. 199.705

Ques 3. What will angle of failure plane from horizontal for sand?



$\sigma_3 = 300$
 $\sigma_1 = 300 + 100 = 400$

Ans. 49.105°

Ques 4. Which of the following having negative skamptam Pore water coefficient?

- A. Quick clays**
- B. Normally consolidated clay**
- C. Lightly overconsolidated clay**
- D. Over consolidated clay**

Ans. D

Ques 5. There is a critical activity is going to have a cost of Rs. 30,000. If this activity is getting completed in 15 days and this work will done in 12 days there will be a cost of Rs. 54,000?

- Statement I: This crashing is advisable economical if indirect cost is Rs. 8,500 per day.**
- Statement II: This crashing is advisable economical if indirect cost is Rs. 10,000 per day.**

- A. Statement I & II both are correct**
- B. Statement I & II both are incorrect**
- C. Statement I is correct & Statement II is incorrect**
- D. Statement I is incorrect & Statement II is correct**

Ans. C