ASSIGNMENT ON FOUNDATION ENGINEERING

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Class: **B.E. Civil – A**

Question:

The time of reach 60% consolidation is 30 seconds for a sample of 1 cm thick tested in a laboratory under condition of double drainage. How many years will the corresponding layer in nature required to reach the same degree of consolidation, if it is 10m thick and drained on one side only?

INPUT

#NUMERICAL ON CONSOLIDATION

```python
# Given Data
H1 = float(input("Entre Value Of H1 in cm : "))
t1 = float(input("Entre value Of t1 in sec : "))
P = float(input("Entre value Of P in % : "))
pi = 3.14
H = int(input("Entre Value Of H in m : "))
# Calculation of Tv
# In Python, '**' is used for exponentiation, not '^'
Tv = (pi/4)*((P/100)**2)
print("Value of Tv: ",Tv)
print("For lab Condition")
d1= (H1/2)/100
print("d1 in m:",d1)
print("For Field Condition")
d2 = H # Assign the value of H to d2
print("d2 in m:",H)
t2 = ((d2**2)/(d1**2))*t1
print("Value of t2 in sec : ",t2)
print("Value of t2 in years : ",t2/(60*60*24*365))
```

OUTPUT

Entre Value Of H1 in cm : 1
Entre value Of t1 in sec : 30
Entre value Of P in % : 60
Entre Value Of H in m : 10
Value of Tv: 0.2826
For lab Condition
d1 in m: 0.005
For Field Condition
d2 in m: 10
Value of t2 in sec : 120000000.0
Value of t2 in years : 3.805175038051750