

Name = Subhan ULLah Khan

ID # = 7861

Section = B

Assignment # 01

Subject = Geotechnical lab

Date = 15/May/2020

QNO1:- What is the Standardized Proctor Test and Standardized Penetration Test?

⇒ According to Proctor the Compaction of Soil mass is dependent on the following four major factors-

- 1 Soil Types -
- 2 Moisture Content -
- 3 Compactive effort -
- 4 Dry density of the Soil -

↳ For a given type of soil and compactive effort the dry density of a soil mass varies with moisture content -

↳ At low moisture content the internal friction and adhesion between the particles contribute to the resistance to compaction -

↳ As the moisture content increases the particles develop moisture films around them which help in lubricating the particles thus increase the workability of the soil mass -

QNO2

What is the classification of Soil based on Free Swell Index?

⇒ SWELL INDEX:- The Free

Swell Index the Increase in volume of soil without any external constraint when subjected to submerged in water.

Free Swell Index	Degree of expansiveness	L.L	PL	S.L
< 20	Low	0.50	0-35%	>17%
20-35	Moderate	40-60%	25-50%	8-18%
35-50	High	50-75%	36-65%	6-12%
> 50	very high	>60%	>45%	<10%

⇒ Why permeability test of the soil is important?

⇒ Soil permeability:- The property of the soil to transmit water and air and is one of the most important qualities to consider for fish culture. A pond built in impervious soil will lose little water through seepage-

Sand: 5.0

Clay loam: 0.8

Silty clay: 0.25

Clay: 0.05

⇒ Penetration Testing or pen Test refers to Simulated Cyber attack that is being made to exploit the System at a Certain Point to detect the exploitable vulnerabilities concerned with the System Security.

1) Once such a vulnerability found then it is used to exploit the System to gain access to the featured data.

2) This kind of testing comes under ethical hacking and the person performing penetration test is known as an ethical hacker.

③ the condition of a System is exploitable when there are multiple users granted with the use of a System with fewer Security Controls.