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Section	A
Subject	Geotechnical Engineering (lab)
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1) Standard Proctor Test	Standard Penetration Test
1) It is used to determine the composition of different type of soil.	1) It is simple & inexpensive method.
2) Its graph is parabolic in shape.	2) It is carried out in borehole.
3) It also gives relation b/w the moisture content & density of soils.	3) It is useful to determine the relative distance & the angle of shearing resistance of cohesion less soil.
4) It is in situ test which is done to determine the optimal moisture content.	It is common in situ method to determine different geotechnical properties of soil.
5) The max optimum moisture content is achieved for the highest value of dry density.	It can be also used to determine the uncontrolled or unconfined compressive strength of cohesive soils.

(2)	Free Swell Index	Degree of Expensiveness	Plastic Limit.
	< 20	Low	0-35%
	20-35	Moderate	25-50%
	35-50	High	35-65%
	> 50	Very High	> 45%

- 3) It is important because;
- 1) To know whether plant roots are being nourished by water.
 - 2) In Engineering it is important to know whether consolidation occurs so it is observed.
 - 3) It is also helpful in fisheries to know about the fish culture.
 - 4) To check if there is seepage of water into ground.