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Section A

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Subject : Geotechnical Engr (Lab)

What is difference between standard Proctor test and standard Penetration test?

<u>Standard Proctor Test</u>	<u>Standard Penetration Test</u>
<p>1) This test is used to determine the compaction of different types of soil.</p> <p>2) It is a laboratory method of experimentally determining the optimal moisture content.</p> <p>3) The max optimum moisture content is achieved for highest value of dry density.</p> <p>4) The apparatus used is cylindrical metal mould having internal dia 4" or 6" the internal effective height of 4.6" & collar of 2"</p>	<p>This test is an situ dynamic Penetration test designed to provide information about geotechnical properties.</p> <p>This test provide samples for identification purpose and provide a measure of penetration resistance.</p> <p>It can be also used to determine the uncontrolled strength of cohesive soil.</p> <p>Its apparatus are Standard split spoon sampler Drop Hammer weight 63.5kg Guiding rod.</p>

2. What is classification of soil based on free swell index? Pg 2

<u>Free Swell Index</u>	<u>Degree of Expansive</u>	<u>Plastic limit</u>
< 20	Low	0 - 35%
20 - 35	Moderate	25 - 50%
35 - 50	High	35 - 65%
> 50	Very high	> 45%

3. Why is permeability test for soil important.

The permeability test is a laboratory experiment conducted to determine permeability of soil.

Permeability test of soil is important because.

- 1) To know whether plant roots are being nourished by water.
- 2) To check seepage of water into ground.
- 3) It is also useful in fisheries to know about fish culture.
- 4) Permeability is important because it affects the supply of root zone air, moisture and nutrients available for plant uptake.