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Section    B

Subject:    Geotechnical Engineering lab

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module:      6th

1)

Q No 1: What is the difference b/w standard proctor test and standard penetration test.

Standard proctor test

1) It is used to determine the compaction of different type of soil.

2) Its graph is parabolic in shape

3) It also give relation b/w the moisture content and density of soil.

Standard penetration test

1) It is simple and inexpensive method.

2) Its carried out in bore hole

3) It is useful to determine the relative density and the angle of shearing resistance of cohesion less soil.

4) It is in situ test which is done to determine the optimal moisture content.

5) The max optimum moisture content is achieved for the highest value of dry density

4) It is common in situ method to determine different geotechnical properties of soil.

5) It can be also used to determine the uncontrolled or confined compressive strength of cohesive soils.

Ques: what is the classification of soil based on free swell index.

Free swell index	Degree of Expansiveness	Plastic limit.
$< 20$	Low	0 - 35%
20 - 38	moderate	25 - 50%
35 - 50	high	35 - 65%
$> 50$	very high	$> 45\%$

(3)  
Q103: why is permeability test for soil important?

Ans: permeability test for soil is important because of the following.

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.