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Section A

Geotech "Lab"

Standard Proctor Compaction test:-

- * It is in-situ test which is used to determine optimal moisture content.
- * It is used to find the compaction of different types of soil.
- * It shows the relation between the moisture content & density of soil.
- * Its graph is parabolic.
- * Maximum OMC is achieved for the highest value of dry density.

Standard Penetration Test:-

- * It is also in-situ test which is used to determine different geotechnical properties of soil.

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* It is used to determine the relative density & angle of shearing resistance of cohesionless soil.

* It is simple & inexpensive method

* It take place in bore hole.

* It is also used to find uncontrolled and undrained compressive strength of cohesive soil.

Ans 2:

Free swell index %age	Degree of expansion	Degree of severity
< 50	Low	Non critical
50 - 100	Medium	Marginal
100 - 200	High	Critical
> 200	Very High	Severe.

Ans 3:-

Importance of Permeability Test for soil:

- * It helps in solving issues related to yield of water, bearing strata & stability of earthen dams
- * It affects the supply of root-zone air, moisture and nutrients available for plant uptake.
- * Used to find seepage in ground
- * It is used to check consolidation to observed.