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Section

A

Assignment & Quiz

Geo technical

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Qno 1)

Ans 1) Soils of swabi district varied from clay to sandy loam at both depths with saturation percentage from 25.75 to 72.12 & 16.80 to 82.30% in upper & subsurface respectively. Bulk density of the surface soil ranged from 1.10 to 1.75 g cm^{-3} . Soil pH was found to be alkaline in both the depths. Electrical conductivity of these soil showed 14% area as saline. Soil were found to be slightly strongly calcareous in both depth. Organic matter content of the soil surface showed that 25% samples are medium, whereas 75% were low.

Quiz

Q:-

Ans: Software used in Geotechnical Engi-

1) 3DEEP:-

This software is ~~use~~ fully integrated with a design software package for automatic model generation. It is virtual reality software for deep excavations.

2) Geos:-

It can be used for excavation design, shallow foundation & deep foundation design, stability analysis, settlement analysis & for various other field tests.

3) Plaxis:-

PLAXIS 2D, PLAXIS 3D is a finite element package intended for two dimensional & 3 dimensional analysis of deformation & stability of soil structure

as well as ground water & heat flow, in geo engineering application such as excavation, foundation & tunnels.

4) FLAC3D;

It is used in advanced geotechnical analysis of soil, rock & structural support in three dimensions. FLAC3D is used in analysis, testing & design by geotechnical, civil & mining engineering.

5) E DUSHAKE;

It is normally used for earth quake & geo technical analysis.

6) MATLAB;

It uses mathematical simulation for analyzing structural

↳ Foundation problems using series of arrays.

7) ALLPILE:-

ALL PILE is a window-based analysis program that handles, virtually all types of piles, including steel pipes, H-piles, precast concrete pile etc.

8) DARTSLAB:-

Dartslab is a geotechnical software for easily processing lab test data. Dartslab features water content, index, specific gravity, particle size & USCS classification of soil.

9) DEEPX:-

DEEPCAN is a software program for the design of embedded earth retaining walls with limit equilibrium & advanced non linear elastoplastic methods.

10) DEEPFNDV

Deep Fnd is a powerful
interactive software for deep foundation
& pile design.

11) QUITV

Bearing capacity analysis for shallow
foundation.