

CHAPTER 03

SOIL MECHANICS

I - TERMINOLOGY

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English	French	Arabic
Excavation	Excavation	حفر
Ground particles	Grains, particules de sol	حببيات التربة
Top soil	Sol supérieure	تربة سطحية
Subsoil	Sol végétal	تربة زراعية
Slope stability	Stabilité des pente	استقرار المنحدر
Bearing capacity of soil	Capacité portante du sol	قوة تحمل التربة
Clay	Argile	تربة غضارية
Saturated soil	Sol saturée	تربة مشبعة
Void ratio	Indice du vide	معامل الفراغات
Moisture content	Teneur en eau – Taux d'umidité	نسبة الرطوبة

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II- a/ : **soil of properties Physical** Some

Les propriétés physiques du sol

Relative Density : La densité relative

Bulk density : La masse volumique

apparente Porosity : La porosité

Void ratio: L'indice du vide

Degree of saturation: Le degré de saturation

III- Soil classification:

(Translate the text below)

Soils are classified in three types when considering the mode of formation

- Transported soils e.g sand gravel ...
- Residual soil(top soil)
- organic soil(top soil, peat).

Classification des sols

Les sols sont classés en trois types lorsque l'on considère le mode de formation
Sols transportés, par exemple
sable gravier...

Sol résiduel (**sediment**)

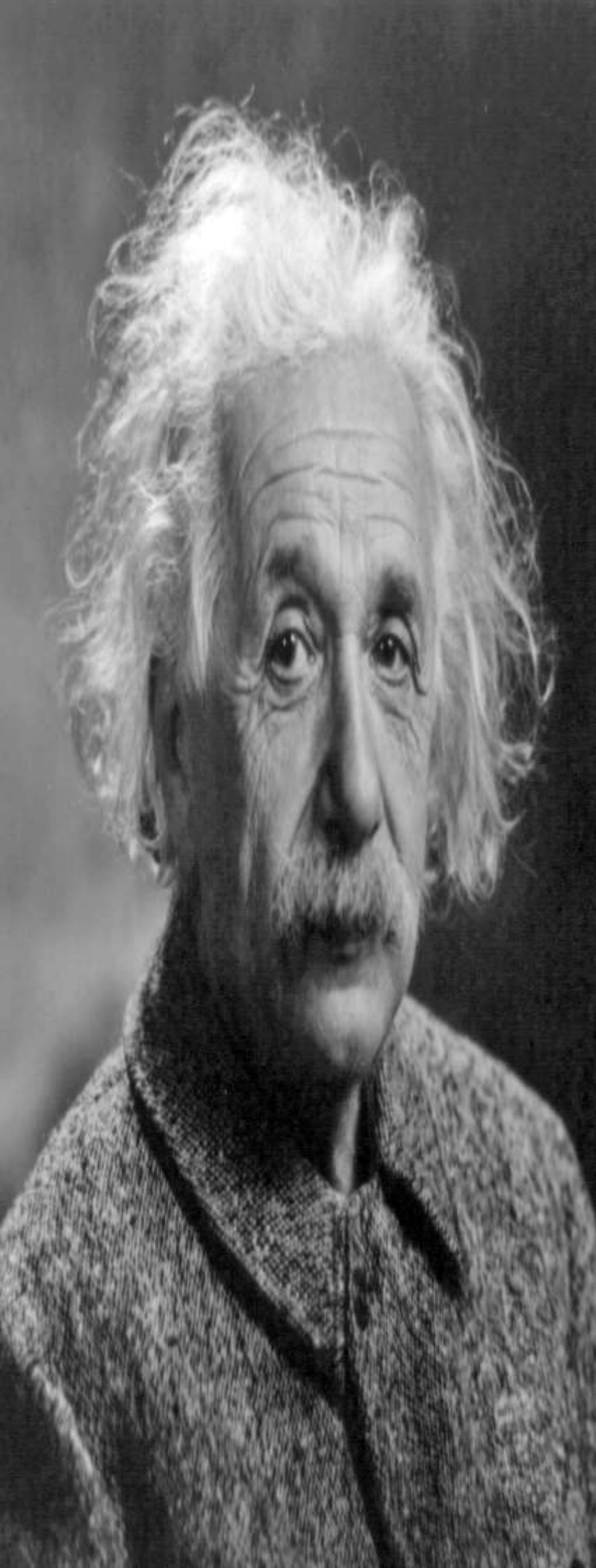
sol organique (**terre végétale, tourbe**).

IV- EXERCISE 1

Choose the right response

false or true answer for the statements below]

Statement	False /True
1) The collapsible soil is not suitable as a foundation basement	
2) The water draining operation for saturated soils is not necessary	
3) The slopes stability for route works is not an important factor.	
4) The granular soil in embankment is not recommended for application route works	
5) The bearing capacity of soil for construction structures could be less than 0,5 bars.	
6) In the seismic zoning in Algeria classified M'sila region as zone 0	



“You do not really
understand something
unless you can explain it
to your grandmother.”

-Albert Einstein

Responses to exercise 1 :
1)-True

2)- **False**

3)-
False

4)-
True

5)-
False

6)-
False

Thank you for
for your attention