M1 GéoT + M1 STR

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1H 30 minutes | **EXAM N° 01** | January the 21st 2019

Exercise 01 : Give translation in French and Arabic for the following **[4 pts]**

A ductile material	Matériau ductile	مادة ذات	Stiffness	Rigidité	صلابة
The sewage water	eau usée	مياه الصرف	The truss	une ferme	شكلة
The bending moment	Moment fléchissant	عزم الانحناء	The shear wall	Refend	جدار حرساني
The aggressive soil	Sol agressif	تربة عدوانية	The live load	surcharge	حمولة استغلال

Exercise 02: Give a sentence using these words. **[4 pts]**

The dead load:.....

The shear wall.....
The high strength steel
:.....

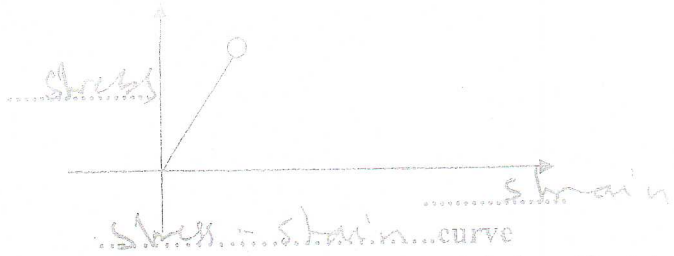
The frame .....

Exercise 03: Choose the false or true answer for the statements below **[3 pts]**

Statemnt	False / True
1) The foundation basement depth could be more than 50 cm	..... True
2) The settlement of foundation could present hazardous for heavy constructions	..... True
3) The slopes stability is not essential for building route works.	..... F
4) The shear wall is not recommended for the resistance of the seismic loading.	..... F
5) The concrete quality for building structures could be less than 100 bars.	F
6) The seismic zone in desert is classified as III in standard Algerian code of practice	..... F .....
	.....

Question 04: complete this graph of the relation of brittle material like the glass (2 pts)

a: Elastic limit



Stress ... Strain ... curve

Question 05 : Complete with the missing word for the paragraph below (3 pts)

period - the system - Soil - distance - mechanism - Response Spectra

Factor Influencing.... Response Spectra

The response spectral values depends upon the following parameters.

I. Energy release ... mechanism
II. Epicentral .... distance
III. Focal depth
IV. Soil condition
V. Richter magnitude
VI. Damping in ... the system
VII. Time ... period of the system

Question 06 : Translate this paragraph to french or Arabic. [4 pts]

Title: Dynamics of earthquake analysis

Titre: Analyse dynamique des structures

Earthquake or seismic analysis is a subset of structural analysis which involves the calculation of the response of a structure subjected to earthquake excitation. This is required for carrying out the structural design, structural assessment and retrofitting of the structures in the regions where earthquakes are prevalent. Various seismic data are necessary to carry out the seismic analysis of the structures. Major data seismic input includes ground acceleration/velocity/displacement data, magnitude of earthquake, peak ground parameters, duration etc.

Le tremblement de terre ou séisme est un sous-ensemble d'analyse des structures, qui implique le calcul de la réponse d'une structure soumise à une excitation dû au séisme.

Celle-ci est exigée pour la conception d'une structure et l'évaluation et le renforcement d'une structure dans les régions sismique ou on s'attend à des secousses telluriques. Les données variées qui nécessaire pour un calcul parasismique et analyse des structures

La majorité des données consiste en /Good luck
L. BELAGRAA

Le sol / L'accélération / la vitesse, déplacement, la magnitude des séisme, les peaks, des paramètres du sol, la durée et