LESSON 3 –TECHNICAL WRITING

EXERCICES-TEXT STRUCTURE: choose the right answer. Only one answer is correct. Each question scores one point.

EVALUATION:

‹7 correct answers: INSUFFICIENT

8-10 correct answers: SUFFICIENT

11-13 correct answers: APPROVES

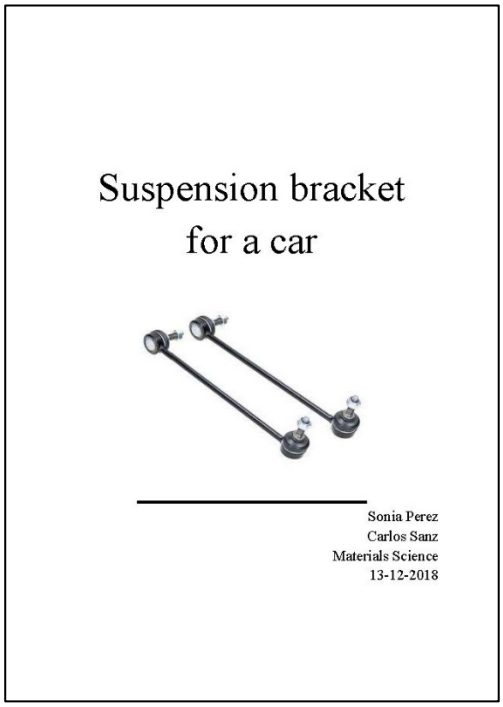
14-15 correct answers: EXCELLENT

PUNCTUATION

If the score obtained in this task is 7 or lower, it is recommended to read the Lesson 3 again before proceeding with the next tasks.

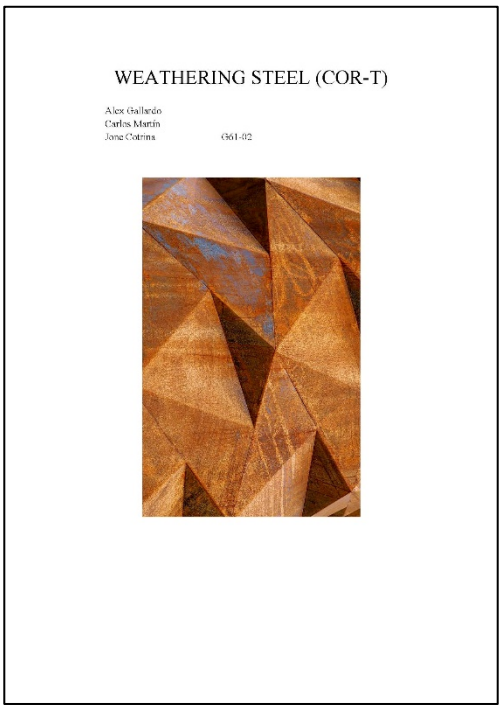
QUESTIONS

1. Which of the following cover pages is the most appropriate? (2p)



(a)

(b)



(c)

2. Which of the following tables is correct? (2p)

Table 1. Thermal properties of Material 1 (MAT1) y Material 2 (MAT2) obtained by Differential Scanning Calorimetry.

Material	**T_{g1} (ºC)**	**T_{g2} (ºC)**	**T_{c1} (ºC)**	**ΔH_{c1} (J g^{-1})**	**T_{m1} (ºC)**	**ΔH_{m1} (J g^{-1})**
MAT 1	25					
MAT 2	15	65	90	1	133	21

Table 2. Thermal properties

Material	**T_{g1} (ºC)**	**T_{g2} (ºC)**	**T_{c1} (ºC)**	**ΔH_{c1} (J g^{-1})**	**T_{m1} (ºC)**	**ΔH_{m1} (J g^{-1})**
MAT 1	25					
MAT 2	15	65	90	1	133	21

Table 3. DSC results for Material 1 (MAT1) y Material 2 (MAT2) after an isothermal treatment at 40 ºC for 10 h.

Material	**T_{g1} (ºC)**	**T_{g2} (ºC)**	**T_{c1} (ºC)**	**ΔH_{c1} (J g^{-1})**	**T_{m1} (ºC)**	**ΔH_{m1} (J g^{-1})**
MAT 1	25.20					

MAT 2	15.1	65.06	90.03	1.2	133	21.25

Table 4. DSC results for Material 1 (MAT1) y Material 2 (MAT2) after an isothermal treatment at 40 °C during 10 h.

Material	**T_{g1}**	**T_{g2}**	**T_{c1}**	**ΔH_{c1}**	**T_{m1}**	**ΔH_{m1}**
MAT 1	25.20					
MAT 2	15.1	65.06	90.03	1.2	133	21.25

3. Which of the following figures is correct? (2 p)

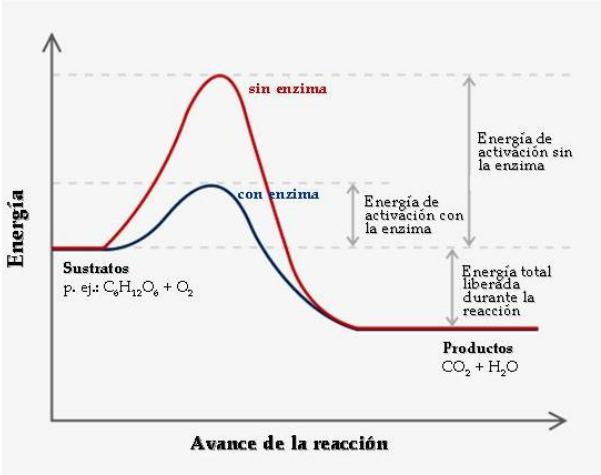


Figure 1. Effect of the enzyme on the energy and reaction evolution.

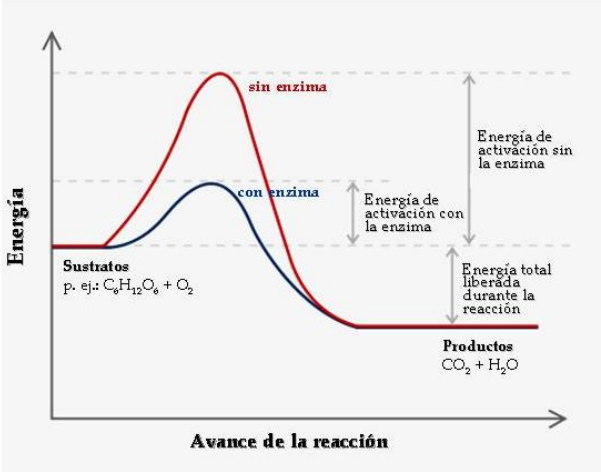


Figure 2. Enzyme´s catalyzing effect on the $C_6H_{12}O_6$ substrate.

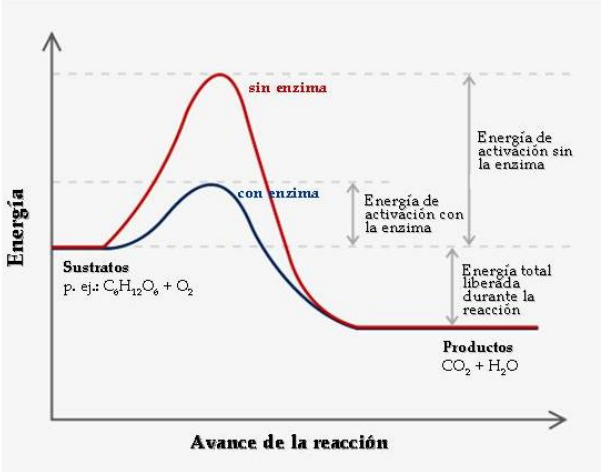


Figure 3. Graphical representation of the enzyme´s catalyzing effect on the $C_6H_{12}O_6$ substrate during a specific X reaction. In red the system in the absence of the enzyme and in blue the system containing the enzyme.

4. Correct the following technical text: (4 p)

"THERMAL CONDUCTIVITY: The thermal conductivity is a property that says the speed at which heat is transmitted in a material, knowing that when the speed is slower the heat will have more trouble to pass. This has a formula: (where Q: is the flow, K: the conductivity, dT/dx: temperature gradient). Thermal resistance is the contrary of thermal conductivity.

Q= k (dT/dx) "

5. **Correct the following technical text for a lab practicum. Replace the words in bold: (5 p)**

ALCOHOL DISTILLATION

Introduction

The distillation is a process **where** a liquid is heated until the most volatile components are converted into the vapor phase and **after** the vapor is cooled down to recover these components in liquid form via condensation. The main objective of the distillation is to **filter** a mixture of various components through the different volatitlity of **these mixtures**, or to separate the volatile compounds from those that are not volatile. During evaporation or dyring processes, the objective is usually to **achieve** the less volatile component; the most volatile compound, mostly water, is disposed.

Objective

----Observe how the components are separated from the tequila using a simple distillation method, **as well as, to better understand the lesson.**

Hypothesis

Through the distillation process that will be carried out, we expect that the components with the lowest boiling will be separated more rapidly..

Results

- **It was known** that the boiling point of the tequila was 82 degrees centigrade.
- **We achieved** 25 y 10 ml of distillate.
- **They had a characteristic aroma, as the first distillate was stronger than the second one.**
- The first distillate was more concentrated than the seocnd one.

- **They had** quite a pleasant taste, but stronger than the tequila.
- Both distillates were transparent.

Conclusions

Our hypothesis was confirmed, as the expected objective was achieved, to separate the tequila, the alcohol and the water, obtaining good results though the distillation process, as we observed the whole process, and checked the taste of both common and distillate tequilas, observing significant differences between both **[too long sentence].**