## Prueba de Suficiencia en Idioma Inglés (PSII)

## Nombre: ………………………………. Legajo: ……………………

## EXAMEN FINAL VIRTUAL

**Do Environmental Factors Affect Plant Physiology?**

The physical environmental factors **affecting** plant physiology include the soil, atmosphere and climate. They show extreme variation between different geographic areas. Perhaps the most demanding climatic conditions are those where the plant needs to tolerate extreme coldness and freezing, but also high temperatures, depending on the season. The boreal zone is an example of such extremely stressful conditions for plants. The plants **have adapted** their physiology to withstand sudden freezing (frost tolerance), and to acclimatize for the long cold periods when they may be partially or fully covered by snow (winter hardiness). Low metabolic activity (dormancy) is needed for survival over the period with the **most** extreme conditions.

The on-going changes in the global climate which occur at a much more rapid rate than the speed of evolutionary adaptability of plants, may be a serious threat to plants in many growing zones on the Earth. These changes will also affect food production. The changes are **largely** caused by man. The chemical composition of the atmosphere has changed, and this affects temperature. The so-called greenhouse gases, acid rain and air pollutants also have direct effects on plants. In some cases, **they** may increase the growth of plants and productivity, but in most cases, they seem to be harmful. They increase photorespiration, induce stress responses, and may cause cellular damage on membranes and organelles, including chloroplasts. Thus, energy is wasted and photosynthetic efficiency reduced (see Environmental Pollution and Function of Plant Leaves). These harmful effects on the flora may cause a chain reaction with serious consequences to the survival of the fauna, including humans.

To survive, plants need to circumvent, tolerate or defend against various biological environmental factors, including herbivores, insects, pathogens, and competition with other plants. Usually, plants and other organisms have evolved a balanced co-existence, or ‘biological equilibrium’, at the natural habits. Disturbance of the system may cause devastatingeffects on plant populations. For example, air pollutants may change the living conditions of insects and/or affect the defense mechanisms of plants, which may cause an insect outbreak and increased damage on plants. In man-made environments, such as arable fields in agriculture, the balancing systems are disturbed or non-functional, and the plants are vulnerable to outbreaks of insect pests and disease epidemics.

**There is** competition for space, light, water and nutrients amongst individuals and between species of plants. Success in competition for the suitable growth environment is crucial for the establishment and survival of individuals and species within a plant community. Adaptation to the prevailing growth conditions determined by the physical and biological factors discussed above is a fundamental requirement. However, plants have developed additional mechanisms to suppress the growth of their competitors. The chemical interactions by which plants regulate seed germination and growth are an important factor affecting the structures of plant communities. The climatic change and biological factors, such as insect pests and pathogens of plants, may affect the plant-plant interactions.

* **Lea el texto con atención**

***EJERCICIO 1. Cuáles de estas ideas aparecen en el texto. Escribe Si o No***

* Participación del hombre en los cambios climáticos.  **Si**
* Plan de emergencia para contrarrestar los efectos de los

gases de efecto invernadero en el ser humano.  **No**

* Efecto de los gases de efecto invernadero en animales y plantas. **Si**
* Breve definición de dormancia.  **Si**
* Factores que pueden favorecer la interacción entre las plantas. **No**

## EJERCICIO 2. Según su uso en el texto, cuál es la opción correcta.

**affecting (**L. 1) se traduce por **a**. afectando **b**. que afectan **c**. afectadas

**have adapted** (L.5) se traduce por a. tienen que adaptar b. tienen adaptadas c. han adaptado

**most** (L.8) se traduce pora. más b. muy c. mayoría

**largely** (L. 11) se traduce por a. en gran medida b. largamente c. grandemente

**there is** (L. 27)se traduce pora. alli hay b. ahí c. hay

**their (**L. 31) se refiere a a. plants b. mechanisms c. competitors

***EJERCICIO 3. Relea el texto y responda las siguientes preguntas en español.***

1. ¿Cómo se clasifican los factores ambientales?

Los factores ambientales se clasifican en factores físicos (suelo, atmósfera y clima) y biológicos (herbívoros, insectos, patógenos y competencia con otras plantas).

1. Menciona algunos de los efectos nocivos que provocan los gases de efecto invernadero.

Los gases de efecto invernadero pueden aumentar la fotorespiración, inducir respuestas de estrés, y también causar daño celular en membranas y organelos/orgánulos, incluyendo a los cloroplastos. (De esta manera, se pierde energía y se reduce la eficiencia fotosintética.)

1. ¿Cuáles son los factores biológicos perjudiciales que deben enfrentar las plantas?

Las plantas deben enfrentar factores biológicos como los herbívoros, insectos, patógenos y la competencia con otras plantas.

***Traduzca el siguiente texto***

***Plant-Plant Interaction***

*Plant growth is also determined by biotic factors, such as soil microorganisms, pollinating insects, pathogens, insect pests, other plants, etc. Plants in a community may compete with other plants for space, water, light, and nutrients. Some plants do not root in soil, but they grow upon another living plant for physical support. They are called epiphytic plants. Epiphytic plants use photosynthesis for energy and obtain moisture from the air or from dampness on the surface of their hosts. After a new plant has been introduced to a new location, there is a chance that the non-indigenous species will reproduce, start spreading throughout the new habitat, and eventually out-compete existing crop species or native plant species. This causes a negative impact on the existing cropping system or ecosystem.*

Interacción entre plantas

El crecimiento de la planta también está determinado por factores bióticos, tales como los microorganismos, insectos polinizadores, patógenos, pestes, otras plantas, etc. En una comunidad las plantan compiten con otras plantas por espacio, agua. Luz y nutrientes. Algunas plantas no arraigan al suelo pero crecen sobre alguna otra planta viva buscando apoyo (físico). Estas plantas se llaman epífitas. Las plantas epífitas usan la fotosíntesis para energía y obtienen humedad del aire o de la humedad de la superficie de sus huéspedes. Luego de que una planta ha sido introducida en un nievo lugar, hay posibilidades de que las especies no autóctonas se reproduzcan, comiencen a esparcirse por todo el nuevo hábitat y finalmente competirán con las especies existentes o especies nativas. Esto provoca un impacto negativo en el sistema de cultivo o ecosistema existentes.