

UCL-ILV

NOM:

Institut des Langues Vivantes

Prénom:

LANG 1861

Signature:

Sc11 BA – May 2018

MATH-PHYS-GEOG-VETE-BIOL-CHIM

BLEU

READING & LISTENING COMPREHENSION

I. CHOOSE THE MOST APPROPRIATE WORDS TO FILL IN THE BLANKS.

1. Some crops and other plants may respond favourably to increased atmospheric CO₂, growing more vigorously and using water more efficiently. At the same time, higher temperatures and _____ climate patterns may change the areas where crops grow best and affect the makeup of natural plant communities.

- a. **shifting** b. achieving c. hindering d. releasing

2. The industrial activities that our modern civilization depends upon have _____ atmospheric carbon dioxide levels from 280 parts per million to 400 parts per million in the last 150 years.

- a. attempted b. **raised** c. aimed d. starved

3. It's reasonable to _____ that changes in the sun's energy output would cause the climate to change, since the sun is the fundamental source of energy that drives our climate system.

- a. supply b. threaten c. improve d. **assume**

4. Since 1978, a series of satellite instruments have measured the energy output of the sun directly. The satellite data show a very _____ drop in solar irradiance (which is a measure of the amount of energy the sun gives off) over this time period. So the sun doesn't appear to be responsible for the warming trend observed over the past several decades.

- a. **slight** b. tough c. thirsty d. widespread

5. Life on Earth depends on energy coming from the sun. About half the light reaching Earth's atmosphere passes through the air and clouds to the surface, where it is absorbed and then radiated _____ in the form of infrared heat. About 90 percent of this heat is then absorbed by the greenhouse gases and radiated back to the surface, which is warmed to a life-supporting average of 15 degrees Celsius.

- a. toward b. **upward** c. forward d. downward

6. Earth-orbiting satellites and other technological advances have enabled scientists to see the big picture, collecting many different types of information about our planet and its climate on a global scale. This body of data, _____ over many years, reveals the signals of a changing climate.

- a. flooded b. harmed c. gathered d. remained

7. The rate of global sea level rise has been accelerating in recent decades, rather than increasing _____, according to a new study based on 25 years of NASA and European satellite data.

- a. formerly b. likely c. previously d. steadily

8. Most tsunamis are caused by large earthquakes on the sea floor when slabs of rock move past each other suddenly, causing the _____ water to move. The resulting waves move away from the source of the earthquake event.

- a. overlying b. reclaiming c. emptying d. relying

9. According to the theory of plate tectonics, Earth is an active planet. Its surface is composed of many individual plates that move and interact, constantly changing and _____ Earth's outer layer. Volcanoes and earthquakes both result from the movement of tectonic plates.

- a. lacking b. arising c. reshaping d. harvesting

10. How does the theory of plate tectonics help us explain natural phenomena such as earthquakes and mountains, which geologists had difficulty _____ prior to the development of the theory?

- a. splitting up b. wiping out c. running out d. accounting for

11. The oceans have already acidified by 30 percent since pre-industrial times. And scientists tell us with certainty that ocean acidification will inevitably worsen even if CO₂ emissions are reduced significantly, because the oceans will continue to absorb CO₂ until an equilibrium is reached with atmospheric levels. It's _____ a matter of chemistry.

- a. randomly b. fairly c. evenly d. merely

12. There is substantial and _____ evidence that the degree of climate change which has already occurred is affecting both species and ecosystems, in many cases adversely. It appears very likely that species will increasingly become extinct and ecosystems will be lost as a result of little further change in the climate.

- a. forecasting b. compelling c. seeking d. tackling

13. Most of the UK's energy (74% at present) is generated by burning fossil fuels: coal, gas and oil. These fuels were created millions of years ago from dead plants and animals. When they are burnt in power stations, fossil fuels _____ carbon dioxide. This gas makes it harder for the heat from the Sun to escape into space, which makes the Earth's atmosphere warmer.

- a. soak up b. point out c. give off d. stem from

14. It is important to _____ gases emitted from active volcanoes not only because they can pose very serious health risks and cause climate change but also because they are indicators of what is happening inside the volcano.

- a. **monitor** b. decay c. enhance d. implement

15. Earthquakes are a serious natural _____ in many parts of the world. They often seem to strike without warning, sometimes inflicting massive damage and casualties.

- a. thrust b. trial c. outline d. **hazard**

16-17. Water _____ [16] has emerged as an important _____ [17] for the 21st century and, as a result, the need is increasing for consistent, long-term water-use data to support wise use of this essential natural resource.

16. a. boundary b. **availability** c. target d. accuracy

17. a. **issue** b. drought c. device d. assumption

18. The scientific method provides a system of organization that helps researchers plan and conduct a study while ensuring that data and results are _____, valid, and objective.

- a. harmful b. scarce c. **reliable** d. eventual

19. California has a number of faults that produce earthquakes during any given year. Some of these faults are located in populated regions, putting the people in those areas at risk. Other faults occur in _____ areas where few people live and few structures exist.

- a. genuine b. **remote** c. substantial d. deep

20. Quantum mechanics _____ the rules of how the world works at the level of atoms, electrons and photons, things that you can't see and the rules are very different.

- a. **deals with** b. withstands c. withdraws d. disposes of

II. CHOOSE THE MOST APPROPRIATE LINK WORDS TO FILL IN THE BLANKS.

- | | | | |
|------------|----------------|--------------|-----------------|
| a. unlike | b. in addition | c. therefore | d. until |
| e. since | f. instead of | g. whether | h. unless |
| i. despite | j. due to | k. although | l. nevertheless |

21. For many threatened species, large well-protected conservation areas (biological reserves) often play major roles in curbing population declines. Such reserves are often cited by conservation biologists and other authorities as the best way to protect individual species as well as the ecosystems they inhabit. B , large biological reserves may harbour several undescribed and unassessed species.
22. K _____ Newton lived hundreds of years ago, his work continues to be viewed as one of the most important contributions to science. His laws of motion explain rest, constant motion, accelerated motion, and describe how balanced and unbalanced forces act to cause these states of motion.
23. Greenhouse gas emissions have global consequences. Dealing with climate change C _____ requires coordinated action by nations around the world.
24. The Greenhouse Effect is the process by which heat is trapped in the earth's atmosphere F _____ being released out into space. This process occurs naturally and keeps the Earth warm enough to sustain life.
25. I _____ years of research, the use of advanced seismic recording equipment, and the efforts of many dedicated scientists, the task of predicting earthquakes is still, largely, a matter of informed guesswork.

-
26. The history of wildlife management contains many examples of successful _____
- Large scale predator control programmes
 - Large predator scale control programmes
 - Control programmes large scale predator
 - Large programmes control scale

27. The first Telescope was invented _____ around the 17th cent 1608, and Galileo Galilei used his Telescope to observe the heavens for the first time.

- invented
- has been invented
- was invented
- had been invented

28. You don't have to _____ be a vet to give your pet the best health possible !

- Must not
- Don't need
- Don't have to
- Are not able

III. FILL IN THE BLANKS WITH THE MOST APPROPRIATE WORDS FROM THE LIST.

- | | | | | |
|------------|--------------|------------|-----------------|-------------|
| a. avoided | b. off | c. shallow | d. dramatically | e. roughly |
| f. stored | g. none | h. both | i. allows | j. reliably |
| k. barely | l. among | m. involve | n. linked | o. occur |
| p. through | q. stringent | r. records | s. cycles | t. hits |

Positive and Negative Effects of Earthquakes

By Chris Burke; Updated January 30, 2018

According to the United States Geological Survey, the National Earthquake Information Center r [29] more than 20,000 earthquakes each year, and estimates that millions o [30] globally. Many earthquakes are small and k [31] noticeable. However, some earthquakes, such as Japan's 2011 earthquake, can release devastating amounts of energy, killing thousands of people and destroying large areas of land. Despite this devastation, earthquakes can also have positive benefits for humans.

Earthquakes are the earth's way of releasing energy f [32] in plate tectonics as they move. If plate tectonics could not move, the world would look d [33] different, with no mountains and distinctly smaller oceans. As plate tectonics move, it naturally s [34] materials from the mantle of the earth. The seafloor that new material creates harbors thousands of species of plants and animals, which themselves play important roles in the human ecosystem by doing things like absorbing carbon dioxide and releasing oxygen p [35] photosynthesis. Without the movement that i [36] earthquakes, g [37] of this could happen on Earth.

Unfortunately, major earthquakes can kill thousands of people. The earthquake b [38] the coast of Indonesia in 2008 released a tsunami that killed more than 280,000 people. The 2010 earthquake in Haiti killed more than 230,000 people. Earthquakes can be especially deadly for developing areas because they often do not have q [39] construction standards and technology that would protect people.

In addition to the death toll, earthquakes can cost billions of dollars in damage to repair. The 2011 Japanese earthquake will cost approximately \$232 billion dollars to repair. The damage the 2004 Indonesian earthquake caused is estimated at e [40] \$8.4 billion dollars. Finally, in addition to physical damage, the destroyed infrastructure may cripple the economies of the affected areas.

IV. You are going to read an article about “*WATER SCARCITY*”. Eleven sentences have been removed from the text. Choose from the sentences A-N the one which fits each gap. There are THREE extra sentences which you do not need to use.

- A. The two main factors driving how much more food we will need are population growth and dietary change.
- B. The adoption of a clean and productive agriculture can have a positive impact on the quantity and quality of the water it uses.
- C. Agriculture accounts for more than 70 percent of the world’s total water use.
- D. For example, Asian cities alone are expected to grow by 1 billion people in the next 20 years.
- E. Water shortages may be caused by climate change, such as altered weather patterns including droughts or floods, increased pollution, and increased human demand and overuse of water.
- F. The same is true of much of the water used in industry.
- G. However, the world’s freshwater resources are distributed very unevenly, as is the world’s population.
- H. To produce enough food to satisfy a person’s daily diet requires about 2000–3000 litres of water.
- I. Securing our food supply is not negotiable.
- J. Half of the world’s wetlands disappeared during the twentieth century, many rivers no longer reach the sea, and fish species are endangered.
- K. Water for drinking and for general household use, comparatively small in terms of volume, needs to be available in the home or, at the very least, close by.
- L. It is also affected by pollution from both energy and food production.
- M. They can mobilize their limited water resources towards domestic and environmental needs – water elsewhere is used to produce the food they need.
- N. On the other hand, increasing volumes of water are needed to feed the global population and to drive local and global economies.

Growing demand for a finite resource

Challenge of the twenty-first century

If all the freshwater on the planet were divided equally among the global population, there would be 5000–6000 m³ of water available for everyone, every year. As experts consider that people experience scarcity below a threshold of 1700 m³/person, this global calculation gives an impression of abundance. [41^g_____]. The areas of most severe physical water scarcity are those where high population densities converge with low availability of freshwater. Many countries are already well below the threshold value. Jordan, like several other countries in the Near East, is an extreme case with less than 200 m³/person per year.

Central to the debate on water scarcity are the ways in which we need and use water. [42^k_____]. The inexorable growth of cities, concentrating large numbers of people in small areas, exacerbates this challenge locally. The water that supports ecosystems, fish, animals and invertebrates must, of course, be left to follow its natural pathways through the world's landscapes. The water that produces much of the world's energy, by hydropower generation or in cooling carbon-fired power stations, has to be available at the point of energy generation, with such decisions often dictated by factors other than water. [43^f_____]. However, most significant is the water that produces our food. The basic metabolism of each of our bodies – heartbeats, respiration and maintaining body temperature – requires about 1800–2300 kcal every day. Every calorie of the food that releases the metabolic energy within us consumes about 1 litre of water in its production.

Crop production, the process of converting carbon and water into the biomass needed to sustain our daily energy requirements, is by far the largest water-consuming sector. [44^h_____]. In contrast, about 2–3 litres are required for drinking purposes, and 20–300 litres for domestic needs. As the world population continues to increase, more people will require more water for the cultivation of food, fibre and industrial crops and for livestock and fish. It is estimated that food and feed crop demand will nearly double in the coming 50 years. [45^a_____]. With rising incomes and continuing urbanization, food habits change towards richer and more varied diets – not only towards increasing consumption of staple cereals, but also leading to a shift in consumption patterns among cereal crops and away from cereals towards livestock and fish products and high-value crops that consume more water.

[46^c_____]. Its share drops to about 40 percent in countries that import food and have a developed and diverse economy, but rises to over 95 percent in many of the countries where agriculture is the primary economic activity.

[47ⁱ_____]. We all need safe and good-quality food in order to live a healthy life. However, the way food is produced and the type of diet people adopt can have significant impacts on the total volume of water used in agriculture. Moreover, agricultural practices across the world have a substantial impact on the world's freshwater resources. [48_b_____].

Clearly, having 2 000 litres of water available to each of us in or near our homes every day is of little relevance to meeting our own metabolic needs. Many people are entirely isolated from food production, relying solely on purchasing food from shops or markets. Where that food is produced is fundamental to the debate on water scarcity. Countries that are wealthy enough to import food and industrial goods can typically cope well with a low national endowment of water resources. [49_{iii}_____].

In the last century, the world population has tripled. It is expected to rise from the present 7.5 billion to 8.9 billion by 2050, before levelling off. Water use has been growing at more than twice the rate of population increase in the last century, and, although there is no global water scarcity as such, an increasing number of regions are chronically short of water. By 2025, 1.8 billion people will be living in countries or regions with absolute water scarcity, and two-thirds of the world population could be under conditions of water stress. The situation will be exacerbated as rapidly growing urban areas place heavy pressure on local water resources.

There will be four main drivers of increasing water scarcity during the coming decades. First, as already mentioned, there is the inexorable growth in population. Second, the world is expected to become increasingly urbanized, focusing the demand for water among an ever more concentrated population. [50^d_____]. Third, per-capita consumption, the amount of domestic water that each person uses, is expected to rise as the world becomes more developed. Fourth, while these factors will increase the demand for water, freshwater resources will change as a result of climate change. While the magnitude of this change is still subject to uncertainty and will vary from one region to another, it is recognized that semi-arid regions will probably see an increase in the variability of precipitations, leading to more frequent periods of drought.

As farmers in particular face the challenge of accessing an increasingly scarce resource, groundwater levels are falling further each year, causing more rivers to dry up. Water is a major determinant of the health and productivity of ecosystems, placed in jeopardy in many parts of the world by reductions in water flows and water quality standards. Increasing water extraction has threatened the integrity of natural ecosystems, leading to the loss of significant biological diversity and undermining the ecosystem productivity on which so many poor people depend. [51_j_____].

UCL-ILV

NOM:

LANGL 1861 PARTIE OUVERTE

Prénom:

Signature:

MATH-PHYS-GEOG-VETE-BIOL-CHIM

PART 1 : Fill in the blanks. Complétez les phrases. Chaque phrase sera lue deux fois

Les questions d'audition seront *reprises 10 min* après la fin de l'exercice.

/10

1. I think this has been one of the _____ years to forecast.
2. The year before they had this _____, these bone-dry fields were _____ in rain; so much rain that it broke all _____.
3. The weather here has all the _____ of global weirding.
4. When an animal dies in the sea, normally, bacteria destroy the soft parts very quickly. Later on, all _____ can find are the hard parts such as _____ or _____.
5. _____ have insulated their bodies to adapt to every climate and humans have used their intelligence to _____ the planet.
6. Stars are the only places in the universe that are hot and _____ enough to _____ together.
7. Forming heavy elements _____ extremely high temperatures that can only be _____ the end of a star's life.
8. The most important event in Egyptian agriculture was the _____ of the Nile.
9. The Babylonians appeared interested in solving practical problems to do with _____ and _____. The Babylonian solutions to these problems are written like mathematical _____.
10. In order to calculate and _____ with large numbers, humans needed to invent a new symbol. And in so doing, they made one of the _____ in the history of mathematics – they invented the zero.

PART 2 : Seen video – Open Questions
