Biology: First year English Language Course **20 June 2019**
Time allowed: 2 hours

1. VERB FORMS (5 points). *Give the correct forms of the verbs and, when required, pronouns or adverbs. You may have to use negative forms, and auxiliary verbs as well as main verbs. Look at the example below.*

Example: When the telephone _____ (RING) I _____ (WATCH) television.
When the telephone *rang* I *was watching* television.

1. If you _____ **(GO)** to London next year, I'm sure you _____ **(HAVE)** a good time
2. After Peter _____ **(LEAVE)** school, he decided _____ **(WORK)** in a shop.
3. David and his girlfriend _____ (**LIVE**) together for a very long time. They first _____ **(MEET)** in 1994.
4. At the moment Mary _____ **(FEEL)** very hungry because she _____ **(EAT, negative)** anything for twelve hours.
5. Peter _____ **(SAY)** that he _____ **(ARRIVE)** at 9 o'clock tomorrow.

2. QUESTION FORMATION (5 points). *Write appropriate questions for the following five answers. Look at the example below.*

Example: It's half-past nine.
What time is it, please?

1. No, we haven't been to Sardinia yet.
2. My favourite season is the summer.
3. He's tall, good looking and very polite.
4. Yes, I'd love a cup of coffee. Thanks.
5. I usually study biology in the evenings.

3. SENTENCE TRANSFORMATION (5 points). *Complete the second sentence so that it has the same meaning as the first. **Do not use more than four words**. Look at the example below.*

Example: You are too young to drive a car. You are __*not old enough*__ to drive a car.

1. Pietro asked Alessio "What are you reading?". → Pietro asked Alessio what he_____ .
2. You aren't allowed to smoke in this building. → Nobody _____ smoke in this building.
2. They make very good cheese here. → Very good cheese_____ here.
3. Do you come here often? → _____ do you come here?
4. Nigel is taller than Paul. → Paul _____ Nigel.
5. There isn't much water. → We _____ much water.

4. GUIDED WRITING (5 points). *You have received an email from your friend. She/he wants to know what you are going to do this summer. Write a reply to your friend. Do the following three things: 1) thank her/him for his email; 2) say what you are going to do this summer (work? study? have a holiday?); 2) ask your friend if she/he would like to visit Sardinia this summer or at some other time. Write at least 70 - 100 words. You can write more words if you want.*

Segue sul retro

5. LEXIS FOR BIOLOGY (10 points). *Read all of this text. Then write an appropriate word or expression for each of the 10 spaces. Look at the example in number* ***0.***

Vitamin D: what is it, how does it work and how do you get it?

Vitamin D, like other vitamins, is a **(0) n** *nutrient* that derives from an external source and that you need in small quantities in order to live. There are two types of vitamin D: vitamin D_2, which is found in **1) p** _____, and vitamin D_3, which is found in animals (including humans). The human skin can produce vitamin D_3 when it is exposed to sunlight. So your body does not have to acquire vitamin D_3 **2) f** _____ food (but this is possible).

More precisely, vitamin D starts as a chemical in the human skin called *7-dehydrocholesterol.* This substance is converted by the ultraviolet B rays from the sun into vitamin D_3, or *cholecalciferol*. The latter travels through the blood to the **3) l** _____ (*fegato*), where it is turned into *25-hydroxycholecalciferol* (25 (OH) D or *calcidiol*). This chemical, which is a prohormone (or precursor), then travels through the blood to the kidneys (*reni*) where it is turned into the active Vitamin D_3 hormone *1,25-dihydroxycholecalciferol* (1,25 $(OH)_2D_3$ or *calcitriol*). This hormone is 'active'. Why? **4) B** _____ it regulates how your body uses calcium and phosphorous.

There are three points to note here. First, although the kidneys produce most of the *calcitriol* that enters the blood, there is some evidence that certain other parts of the body, such as the colon (in other words, the large **5) i** _____), pancreas and prostrate, can also perform this function. Second, another important chemical **6) t** _____ stimulates the production of *calcitriol* is the parathyroid hormone. Third, *calcitriol* is carried in the blood by a vitamin D-binding protein. This protects the *calcitriol* from destruction by cells and from excretion by the kidneys.

The best understood function of *calcitriol* is the control of how your body uses calcium and phosphorus to **7) m** _____ strong bones. However, research shows that many other organs and systems in your body may also need active vitamin D_3. As well as helping to build strong bone structure, active vitamin D_3 can **8) r** _____ the risk of various cancers and prevent heart disease and diabetes.

Vitamin D_3 can be obtained from three major sources. The first, as explained above, is through exposure to sunlight. The amount of vitamin D_3 you produce in this way depends on the time of year (e.g., summer or **9) w** _____), your position on the Earth (in terms of latitude and altitude), and obstacles to the exposure of your skin to the sun (e.g., clouds, a dark skin, smog or suntan lotion). The second source is food. Small amounts of vitamin D can be obtained from milk, mushrooms, cod-liver oil and certain kinds of fish such as salmon, mackerel and tuna. (A problem with eating tuna, however, is that this may lead to an accumulation in the body of dangerously high levels of mercury.) Third, vitamin D_3 supplements can be **10) b** _____ from a pharmacy.

ANSWERS / SOLUZIONI

1. VERB FORMS (5 points). *Give the correct forms of the verbs and, when required, pronouns or adverbs. You may have to use negative forms, and auxiliary verbs as well as main verbs. Look at the example below.*

Example: When the telephone _____ (RING) I _____ (WATCH) television.
When the telephone *rang* I *was watching* television.

1. 1. If you **_GO_/WENT (GO)** to London next year, I'm sure you **_WILL HAVE / 'LL HAVE_ / WOULD (HAVE)** a good time

2. After Peter **_LEFT_ (LEAVE)** school, he decided **_TO WORK__ (WORK)** in a shop.

3. David and his girlfriend **_HAVE LIVED_ (LIVE)** together for a very long time. They first **_MET_ (MEET)** in 1994.

4. At the moment Mary **_IS FEELING / FEELS__ (FEEL)** very hungry because she **_HAS NOT / HASN'T EATEN_ (EAT, negative)** anything for twelve hours.

5.Peter **_SAID____ (SAY)** that he **_WILL /WOULD ARRIVE____ (ARRIVE)** at 9 o'clock tomorrow.

2. QUESTION FORMATION (5 points). *Write appropriate questions for the following five answers. Look at the example below.*

Example: It's half-past nine.
What time is it, please?

1. No, we haven't been to Sardinia yet. HAVE YOU BEEN TO SARDINIA?
2. My favourite season is the summer. WHAT'S YOUR FAVOURITE SEASON?
3. He's tall, good looking and very polite. WHAT'S HE LIKE?
4. Yes, I'd love a cup of coffee. Thanks. WOULD YOU LIKE A CUP OF COFFEE?
5. I usually study biology in the evenings. WHEN DO YOU USUALLY STUDY BIOLOGY? / WHAT DO YOU USUALLY DO IN THE EVENINGS?

3. SENTENCE TRANSFORMATION (5 points). *Complete the second sentence so that it has the same meaning as the first. **Do not use more than four words**. Look at the example below.*
Example: You are too young to drive a car. You are __ *not old enough* __ to drive a car.

1. Pietro asked Alessio "What are you reading?". → Pietro asked Alessio what he_WAS READING_ .
2. You aren't allowed to smoke in this building. → Nobody _IS ALLOWED TO / CAN_ smoke in this building.
3. They make very good cheese here. → Very good cheese_IS MADE____ here.
4. Nigel is taller than Paul. → Paul _IS SHORTER THAN____ Nigel.
5. There isn't much water. → We _DON'T HAVE____ much water.

4. GUIDED WRITING (5 points). *You have received an email from your friend. She/he wants to know what you are going to do this summer. Write a reply to your friend. Do the following three things: 1) thank her/him for his email; 2) say what you are going to do this summer (work? study? have a holiday?); 2) ask your friend if she/he would like to visit Sardinia this summer or at some other time. Write at least 70 - 100 words. You can write more words if you want.*

Credit will be given for good grammar, appropriate lexis and completion of the three tasks.

Example (100 words):

Dear Barbara,
Thanks for your email which I enjoyed reading. This summer I'm going to do three things. First, in July, I have to study for two biology exams. Then, in August, I will work in a bar for two or three weeks to earn some money. But at the end of August I hope to have a short holiday with my friends in Alghero. Would you like to visit Sardinia at the beginning of September? You could stay in my house. Or perhaps you would prefer to come to Sardinia at Christmas? Please let me know.
Best wishes,
Giovanna

5. LEXIS FOR BIOLOGY (10 points). *Read all of this text. Then write an appropriate word or expression for each of the 10 spaces. Look at the example in number **0**.*

5. LEXIS FOR BIOLOGY (10 points). *Read all of this text. Then write an appropriate word or expression for each of the 10 spaces. Look at the example in number **0**.*

Vitamin D: what is it, how does it work and how do you get it?

Vitamin D, like other vitamins, is a **(0) n** *nutrient* that derives from an external source and that you need in small quantities in order to live. There are two types of vitamin D: vitamin D_2, which is found in **1) p _PLANTS_b**, and vitamin D_3, which is found in animals (including humans). The human skin can produce vitamin D_3 when it is exposed to sunlight. So your body does not have to acquire vitamin D_3 **2) f _FROM_** food (but this is possible).

More precisely, vitamin D starts as a chemical in the human skin called *7-dehydrocholesterol.* This substance is converted by the ultraviolet B rays from the sun into vitamin D_3, or *cholecalciferol*. The latter travels through the blood to the **3) l _LIVER__** (*fegato*), where it is turned into *25-hydroxycholecalciferol* (25(OH) D or *calcidiol*). This chemical, which is a prohormone (or precursor), then travels through the blood to the kidneys (*reni*) where it is turned into the active Vitamin D_3 hormone *1,25-dihydroxycholecalciferol* (1,25 $(OH)_2D_3$ or *calcitriol*). This hormone is 'active'. Why? **4) B _BECAUSE_** it regulates how your body uses calcium and phosphorous.

There are three points to note here. First, although the kidneys produce most of the *calcitriol* that enters the blood, there is some evidence that certain other parts of the body, such as the colon (in other words, the large **5) i _INTESTINE__**), pancreas and prostrate, can also perform this function. Second, another important chemical **6) t _THAT__** stimulates the production of *calcitriol* is the parathyroid hormone. Third, *calcitriol* is carried in the blood by a vitamin D-binding protein. This protects the *calcitriol* from destruction by cells and from excretion by the kidneys.

The best understood function of *calcitriol* is the control of how your body uses calcium and phosphorus to **7) m __MAKE__** strong bones. However, research shows that many other organs and systems in your body may also need active vitamin D_3. As well as helping to build strong bone structure, active vitamin D_3 can **8) r _REDUCE_** the risk of various cancers and prevent heart disease and diabetes.

Vitamin D_3 can be obtained from three major sources. The first, as explained above, is through exposure to sunlight. The amount of vitamin D_3 you produce in this way depends on the time of year (e.g., summer or **9) w _WINTER_**), your position on the Earth (in terms of latitude and altitude), and obstacles to the exposure of your skin to the sun (e.g., clouds, a dark skin, smog or suntan lotion). The second source is food. Small amounts of vitamin D can be obtained from milk, mushrooms, cod-liver oil and certain kinds of fish such as salmon, mackerel and tuna. (A problem with eating tuna, however, is that this may lead to an accumulation in the body of dangerously high levels of mercury.) Third, vitamin D_3 supplements can be **10) b __BOUGHT_** from a pharmacy.