

## Session de contrôle

Épreuve :  
**ANGLAIS**

Sections :

Mathématiques, Sciences expérimentales, Sciences de l'informatique et Économie et gestion

Durée : **2 h**



Coefficient de l'épreuve : **1**

**Le sujet comporte 04 pages**

### I. READING COMPREHENSION

1. I am an African-American woman working as a scientist and a professor. My father is a diesel mechanic who showed me the value of using one's hands to rebuild an engine or repair a transmission. My mother is a blackjack dealer who taught me that mathematics was necessary to excel in a job. My grandfather was a farmer. I was able to learn, firsthand from him, basic principles of fluid dynamics. None of these experts had a college education. Yet, each one of them showed me that hard work, mathematics and science can contribute to society and accomplish work to be proud of.

2. Nevertheless, when I went to graduate school, my professors and some of my peers were unlikely to believe I could succeed. They had not seen someone like me reach graduate school. As a student, I was inclined to believe them because when women are rarely exposed to someone like themselves in the classroom, as a peer or as a professor, it is difficult to imagine themselves succeeding in that environment. Misunderstandings like these contribute to the low numbers of women and minorities in the sciences. Data shows that women and minorities are selectively sorted out of engineering, mathematics and science careers. Talented women enrol in challenging science courses to learn all they can to excel in a technical career. Yet, the institutional support they need is unavailable.

3. My career shows how important it is to have that kind of support. My experience as a scientist has made me an expert in small vessels that feed the organs of our bodies. I have helped engineer artificial blood vessels that deliver blood and oxygen to vital organs. Were it not for people who were willing to step up at critical points and vouch for my abilities and potential as a student, scientist and teacher, my expertise and experience would not be applied as they are today.

*The New York Times* February 25, 2017  
(Adapted)

Section : ..... N° d'inscription : ..... Série : .....

Nom et prénom : .....

Date et lieu de naissance : .....

Signatures des surveillants  
.....  
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### COMPREHENSION QUESTIONS (12 marks)

1. Tick () the most appropriate title for the text. (1 mark)

- a. An Engineer's Success Story
- b. A Talented Mathematician
- c. A Successful Career in Science

2. For each of the following false statements, pick out one detail from the text showing that it is false. (2 marks)

a. The narrator's mother had a university degree. (paragraph1)

-----*None of these experts had a college education* -----

b. Universities allocate financial assistance to women who enroll in the sciences.(paragraph2)

----*Yet, the institutional support they need is unavailable* -----

3. Complete the following paragraph with words from paragraph 2. (one word per blank) (3 marks)

The narrator was --- *exposed* --- to her peers' mistrust. They thought she was ---*unlikely*--- to be talented. The graduate school --- *environment* --- was indeed very hard for minorities to cope with.

4. Tick the two appropriate options. (2 marks)

According to the text, the narrator managed to become a professor thanks to:

- encouragement  good luck  hard work  peers' support

5. For each of the following definitions, pick out one word meaning nearly the same. (3 marks)

a. directly (paragraph 1): --*firsthand*---

b. a card game (paragraph 1): --- *blackjack*---

c. invent (paragraph 3) : --- *engineer*---

6. Give a personal justified answer to the following question. (1mark)

Should women be selectively sorted out of technical careers? Why or Why not?

(Any personal and justified answer is accepted as long as there is no contradiction between the answer and the justification.)

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## II. WRITING (12 marks)

1. Use the information in the table below to write a **four-line** paragraph to present the Healthy School Campaign. **(4 marks)**

<b>Foundation</b>	2015
<b>Organizers</b>	Ministry of Education + Ministry of Health
<b>Purpose</b>	- Support students' healthy food choices - Establish nutrition standards
<b>Target schools</b>	Rural primary schools

*Content (full and coherent use of the prompts) 02 marks*

*Language and mechanics of writing 02 marks*

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2. The use of plastic bags in Tunisia has become a real concern. Write a **twelve-line** article for your school magazine to state the threats of this phenomenon and suggest some solutions. **(8 marks)**

*Content (relevance of ideas) 03 marks*

*Language (grammar and vocabulary) 03 marks*

*Mechanics of writing (spelling, punctuation / capitalization) 02 marks*

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### III LANGUAGE (6 marks)

#### 1. Fill in the blanks with 6 words from the box. (3 marks)

spectacular / ought / around / round / up / five-star / should / both

Do you need a break from the cold? Try this destination for some welcome winter warmth. Spend this December in -- *five-star*-- luxury in Dubai, where holidays offer endless shopping, sightseeing, eating and sunbathing opportunities all year ---*round*---. Dubai has much to offer and is reputed to be the world's fastest-growing city. With glittering skyscrapers and azure beaches, it is great for ---*both*--- thrill-seekers and beach-lovers. December temperatures reach an average of 26 degrees with ---*up*--- to eight hours of sunshine expected. When you are tired of soaking up the sun, try a desert safari over the vast dunes or book a hot-air balloon trip to experience ---*spectacular*--- views of the desert. Culture lovers ---*should*--- visit Al-Fahidi Fort, the oldest existing building in the city, where the Dubai Museum offers a fascinating peek into Dubai's culture and history.

#### 2. Put the bracketed words in the right tense or form. (3 marks)

The next time you fly, your pilot might be a robot. Researchers at the Korea Advanced Institute of Science and Technology (**develop**) *have developed* a robot that can fly a plane all by itself. Their pilot robot, called PiBot, can turn on the engine, take off, land and navigate. The (**much**) *most* impressive aspect of PiBot is that it does not require any modifications to a standard airplane in order to fly it. It is capable of operating the wheel and all the switches and levers in a (**type**) *typical* airplane cockpit. This ability to fly a standard airplane gives PiBot an advantage over other types of autonomous flying technology, which require custom aircraft or expensive changes to existing aircraft to function. Currently, PiBot can land the plane (**success**) *successfully* about 80 percent of the time, which (**be**) *is* high for a robot but probably not good enough for real (**fly**) *flights*. The researchers hope that PiBot could be used to fly planes in dangerous areas, and eventually to replace human pilots altogether.