

[1] Professor Rachid Yazami's passion for science started when he was a child in his native city, Fez, with a fascination for geology. His academic ambitions soon progressed from analyzing rocks to acquiring a doctorate in graphite compounds for lithium batteries in France. In 1980, aged 26, he made a key discovery that led to the development of the lithium-graphite anode, which is used in rechargeable batteries in mobile phones and laptops.



- [2] "I still remember the day I opened my battery and saw that graphite had become a gold color. I converted graphite into gold," he told Rebecca from *Inspire Middle East*. His professors were very supportive when they realized the importance of his discovery: lithium can be stored into graphite. This was a turning point in battery history.
- [3] Despite this scientific achievement, it took more than a decade to commercialize the lithium battery. For some reason, the French government didn't consider the invention of graphite as a major invention. So, Yazami did not get a copyright, which means that <u>it</u> could be used for free by other companies. Today, around 95% of batteries produced globally use Yazami's technology. Worldwide, analysts think that the commercial lithium battery market is worth about \$80 billion.



- [4] In his battery research, Yazami is exploring the capabilities of artificial intelligence for ameliorating the quality of people's lives. He is working on a technique that will allow an electric car battery to last for up to ten years instead of five years now. Moreover, the battery can be charged in 10 minutes, the same time we spend in the gas station when we fill our car tank.
- [5] Yazami has won many awards, including the Draper Prize, the equivalent of a Nobel Prize for engineers. Even at the age of 67, he remains dynamic and wholly dedicated to his work. He is currently the Principal Scientist

at Nanyang Technological University in Singapore, and is frequently consulted by the business community **there.** 

Adapted from: www.euronews.com

خاص بكتابة الامتحان					، الوطني الموحد للب ة الاستدراكية <sup>2</sup>	المملكة المغربية وزارة التربية الوضنية والتعليم الأولو والرياضة مناسكة مناسكة ٨١٥٥١٤٨ (١٩٥٥١٤٨ مــــــــــــــــــــــــــــــــــــ			
нинининининининин				I*	- الموضوع -	RS 12			
رقم الامتحان:					الإسم الشخصي والعائلي: تاريخ ومكان الازدياد:				
مدة 2 المعامل 2 الإنجاز 2					المادة الشعبة والمسلك				
			:					<del>-</del> -	
<u>م</u> ان	ة الامتد	ص بكتاب	خاد	 ة على 20)	<b>ادة: اللغة الإنجليزية</b> كل الشعب العلمية والتقنية <b>والأصيلة</b>				
	2 على 5	الصفحة: 2		اسم المصحح وتوقيعه:			ورقة الإجابة	RS 12	
<b>A.</b> 4	<ul> <li>I. COMPREHENSION (15 POINTS)  BASE ALL YOUR ANSWERS ON THE TEXT.</li> <li>A. ARE THESE STATEMENTS TRUE OR FALSE? JUSTIFY. (3 pts)  1. Professor Yazami's first interest was lithium batteries.  2. The majority of batteries worldwide use Yazami's technology.  3. Yazami has an important position at Nanyang Technological University in Singapore.  B. ANSWER THESE QUESTIONS. (3 pts)  1. How has Professor Yazami's invention changed the history of batteries?  2. How long did it take the lithium batteries to be on the market?</li> </ul>								
3. Why could companies use Yazami's invention for free?  C. COMPLETE THE FOLLOWING SENTENCES WITH INFORMATION FROM THE TEXT.(2pts)  1. Thanks to Yazami's technique, electric car batteries will  2. Yazami is still active although  D. PICK OUT FROM THE TEXT PHRASES OR SENTENCES WHICH SHOW THAT (2 pts)  1. Yazami was encouraged by his professors.  2. the Draper Prize is a very important prize.  E. FIND IN THE TEXT WORDS THAT MEAN ALMOST THE SAME AS (3 pts)  1. very important (paragraph 1): 2. improving (paragraph 4): 3. committed (paragraph 5):  F. WHAT DO THE UNDERLINED WORDS IN THE TEXT REFER TO? (2 pts)									
1. <u>it:</u> (paragraph 3):									

# لا يكتب أي شيء في هذا الإطار

الصفحة: 3 على 5	RS 12	الامتحان الوطني الموحد للبكالوريا -الدورة الاستدراكية 2022 – الموضوع مادة:اللغة الإنجليزية - كل الشعب العلمية والتقنية و الاصيلة						
II. LANGUAGE	(15	POINTS)						
A. PUT THE V	VORDS IN BRA	ACKETS IN THE CORRECT FORM. (2 pts)						
	*	ical (treat) after the accident. e, it teaches important (morality) lessons.						
B. FILL IN TH		THE RIGHT WORDS FROM THE LIST. (2 pts) ch - cultural - strange - foreign - achieve						
1. Our univ	ersity will	a new training program for its staff.						
2. The new	economic reform	n will attract investment in agriculture.						
1. The book	was cheap. Yet	ces as indicated. (4 pts) it did not sell well.						
		in spite of						
•	l clean the room	•						
		ON THE						
		or?" The neighbor asked.						
		now						
•	J J J							
The journ	nal	if she hadn't						
used imp	olite language.							
D. PUT THE V	ERBS IN BRAC	CKETS IN THE CORRECT FORM. (3 pts)						
2. We starte		ouse yesterday. We (paint)						

# لا يكتب أي شيء في هذا الإطار

الصفحة: 4 على 5		الامتحان الوطني الموحد للبكالوريا -الدورة الاستدراكية 2022 – الموضوع مادة:اللغة الإنجليزية - كل الشعب العلمية والتقنية و الاصيلة					
E. MATCH EA	ACH EXPRI	ESSION W	ITH ITS	S APPR	OPRI	ATE F	UNCTION. (2 pts)
		Expressi	ions				Functions
<ol> <li>"How do you find the idea of working on Saturdays?"</li> <li>"Would you mind helping me fix my washing machine?"</li> <li>"I'll understand better if you give me an example."</li> <li>"You should get your parents' permission before you travel alone."</li> </ol>				a. Making a complaint b. Asking for clarification c. Giving advice d. Making a request e. Asking for opinion			
	t news! Let's	s celebrate	it!				
	d idea! The						
III. WRITING TASK 1:	(10 PO (4 pts)	OINTS)	DO TAS	SKS 1 A	ND 2		
Complete th	ne following	paragrapl	1.				
There are	e many	things I	would	like	my	school	administration to chang
First,							

# لا يكتب أي شيء في هذا الإطار

الصفحة:5 على 5	RS 12	الامتحان الوطني الموحد للبكالوريا -الدورة الاستدراكية 2022 – الموضوع مادة:اللغة الإنجليزية - كل الشعب العلمية والتقنية و الاصيلة
TASK 2: (6 pts	s)	
Do you prefer to	travel with ye	our friends or with your family?
Write a short a	rticle to be p	ublished in a travel blog about your choice. Give your reasons.

### الامتحان الوطنى الموحد للبكالوريا 4° XNV ET I NETO EO المملكة المغربية الصفحة: 1 على 1 وزاراة التربية الوصنية 4.C.U.01 | 80XCE .I.C80 الدورة العادية 2022 V 800NEV °EXTPOS V 4811814 нининининининининин-**T**\* - غزاصر الإجابة -NR 12 اللغة الإنجليزية المادة مدة 2 المعامل 2 الإنجاز كل الشعب العلمية والتقنية الشعبة والمسلك

### KEY AND MARKING SCALE

Accept any appropriate answer not mentioned in this key.

## I. COMPREHENSION (15 POINTS)

Testees should not be penalised for spelling and grammar mistakes in the comprehension section.

- A. TRUE OR FALSE: (3 pts; 1 pt each: 0.5 pt for the right choice and 0.5 pt for the right justification. Consider the justification only if the choice is correct. Quotes from the texts are acceptable.)
  - 1. F. ... when I first started my journey, I had no idea where ...
  - 2. F. He had only 50 dirhams left.
  - 3. T. He is already planning his next trip / My next journey is going to be on a sailing boat. / I have crossed the land .....the ocean.

# B. WH QUESTIONS: (4 pts; 1 pt each)

- 1. Othman walked, cycled and skated.
- 2. ...because he didn't have his passport on him.
- 3. ...private sponsors and donors.
- 4. ... he wants young people to change their perceptions of Africa/see things differently.

# C. SENTENCE COMPLETION: (3 pts; 1 pt each)

- 1. ... a lot about the traditional African life and the continent's diversity and hospitality.
- 2. ... to finance his journey/earn some money.
- 3. ... some of the challenges Othman faced in his journey.

## D. CHART FILLING: (1 pt; 0.5 pt each)

Dates/Figures	What they refer to
800	The sum of money Othman had before he started his journey.
2015	The year Othman started his journey.
30000	The distance Othman traveled.

E. WORD MEANING: (2 pts; 1 pt each)

1. hospitality

2. perceptions

F. WORD REFERENCE: (2 pts; 1 pt each)

1. (the) journey

2. (African) people

II. LANGUAGE (15 POINTS)

A. ERROR CORRECTION: (4 pts; 1 pt each)

1. have lived/have been living

2. drinking

B. WORD FORM: (2 pts; 1 pt each)

3. directed 1. involvement

4. which/that

2. productive

C. GAP-FILLING: (2 pts; 1 pt each)

1. brought about

2. green

# D. SENTENCE REWRITING: (3 pts; 1 pt each)

- 1. ... I wish I had done well in the interview/ I wish I had been hired.
- 2. to contribute/that she/he should contribute to charity ...
- 3. ... so that his wife can focus/focuses/will focus on her studies.
- E. APPROPRIATE RESPONSES: (2 pts; 1 pt each) 1. a / Definitely 2. c / Lucky you!
- F. CONVERSATION COMPLETION: (2 pts; 1 pt each) Accept any correct and appropriate answer.

III. WRITING (10 POINTS; Task 1: 4 pts; Task 2: 6 pts)

The following criteria should be respected while scoring the writing tasks.

Scoring criteria	Task 1	Task 2
Relevance of content to the task	2 pts	3 pts
Appropriateness and variety of vocabulary	1 pt	2 pts
Grammar and mechanics	1 pt	1 pt