

[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 <u>there.</u>

Adapted from: www.euronews.com

الصفحة: 1 على 1			يا		الوطني الموحد للب المسالك المهنية رة الاستحراكية 2022		المملكة المغربية وزارة التربية الوضنية مالتعليم الأولو والرياضة المركز الوضنو للتقويم والامتحانات		
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KEY AND MARKING SCALE <u>ACCEPT ANY APPROPRIATE ANSWER NOT MENTIONED IN THIS KEY.</u> I. COMPREHENSION (15 POINTS) <u>Testees shouldn't be penalised for spelling or grammar mistakes in the comprehension section.</u> A. TRUE/FALSE: (3 pts, 1pt 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)									
 F with a fascination for geology/analyzing rocks. Taround 95% of batteriesuse Yazami's technology. Tthe Principal Scientistin Singapore /frequently consulted 									
 B. WH-QUESTIONS: (3 pts; 1 pt each) 1. He converted graphite to gold/lithium can be stored into graphite/key discoverylaptops. 2 more than a decade. 3because he didn't get a copyright./ The French government a major invention. 									
 C. SENTENCE COMPLETION: (2 pts; 1 pt each) 1 last up to 10 years./be charged in 10 minutes. 2 he is 67 years old. D. PICK OUT: (2 pts; 1 pt each) 1. His professors were very supportive. 2 the equivalent of a Nobel Prize for engineers. E. WORD MEANING: (3 pt; 1 pt each) 1. key 2. ameliorating 3. dedicated F. WORD REFERENCE: (2 pts; 1 pt each) 1. the invention (of graphite)/graphite 2. (in) Singapore. II. LANGUAGE (15 POINTS) 									
A. WORD FORM: (2 pts; 1pt each)1. treatment2. moralB. GAP FILLING: (2 pts; 1 pt each)1. launch2. foreignC. SENTENCE REWRITING: (4 pts; 1 pt each)2. foreign									6
 didn't sell well in spite of being cheap/in spite of the fact that it was cheap/in spite of its (cheap) price. will be cleaned after the party. if/whether Amina had called the doctor. wouldn't have rejected Amal's article / would have accepted 									
 D. VERB FORM: (3 pts; 1 pt each) 1. broke 2. will have painted 3. joining E. MATCHING: (2 pts; 0.5 pt each) 1. e 2. d 3. b 4. c F. EXCHANGE COMPLETION : (2 pts; 1 pt each) Accept any correct and appropriate answer 									
III. WRITING (10 POINTS) The following criteria should be respected while scoring the writing tasks.									
					criteria	Task 1 (4 p	oints)	Task 2 (6 points)	
		-			to the task	2 pts		3 pts	
					variety of vocabulary	1 pt		2 pts	
		Gram	mar and n	nechan	nics	1 pt		1 pt	