



PARA AS QUESTÕES DE 21 A 30, ESCOLHA A ALTERNATIVA QUE COMPLETA O TEXTO 1 CORRETAMENTE.
(VALOR 0,4/QUESTÃO)

Texto 1

FROM FILM STAR TO FREQUENCY-HOPPING INVENTOR

I'm guessing that some younger readers _____ (21) _____ who Hedy Lamarr was. Old-timers remember her as a popular Hollywood star of the mid-20th century. Characterized by MGM studio mogul Louis B. Mayer as "the most beautiful girl in the world," a title said to originally have been bestowed by stage director Max Reinhardt, she appeared in some 25 Hollywood films between 1938 and 1958.

_____ (22) _____ her fans and many of her Hollywood colleagues was her creative side. They were unaware that _____ (23) _____ the cameras were not rolling, Ms. Lamarr might be at home at her drawing board, diligently working at some concept that might lead to a commercial product or a patentable invention.

_____ (24) _____ an admirer of Hedy Lamarr the movie star (I particularly remember her in "Ziegfeld Girl," costarring James Stewart, Judy Garland, Lana Turner, and Tony Martin, and "H. M. Pulham, Esq.," with Robert Young and Van Heflen), I too was unaware of her innovative proclivities until 1984, when historian of cryptology David Kahn authored an article in *IEEE Spectrum*. It revealed to the uninitiated the existence of a 1941 patent _____ (25) _____ to Lamarr and her co-inventor, George Antheil, based on frequency-hopping and titled "Secret Communication System." World War II _____ (26) _____ in Europe, and Hedy, a native Austrian, left her munitions magnate husband Friedrich Mandl and relocated to the United States in 1937. As Hitler moved relentlessly in his attempt to conquer most of northern Europe, she was appalled by the German U-boat sinking of the SS City of Benarus. (...). She considered quitting the movie business and offering her services to the newly organized National Inventors Council (NIC), _____ (27) _____ to evaluate technology that could be useful in wartime, and chaired by inventor Charles Kettering. She did _____ (28) _____, however.

In Hollywood, Hedy had met George Antheil, not an engineer but a composer with "a fair grasp of electronics," as historian Kahn expressed it. Antheil joined her in her attempt to devise a jamproof guidance system for Allied torpedoes. A year before Pearl Harbor, she told Antheil she knew "a good deal about new munitions and various secret weapons," presumably knowledge acquired while she was privy to discussions between Mandl and his munitions agents.

While not on the movie set, Lamarr would work with Antheil in her apartment to move her idea from concept to a practical system. In her early working documents a reference is made to the 116RX, the 1939 Philco radio console that featured the first wireless remote control (termed the Mystery Control and offering the listener options to select up to eight stations, a volume control, and an off switch). This _____ (29) _____ just one among several inputs that inspired her to _____ (30) _____ the idea she called "hopping of frequencies" (...)

CHRISTIANSEN, D. Adaptado de **From Film Star to Frequency-Hopping Inventor**. In: Institute of Electrical and Electronics Engineers. Disponível em: <<http://te.ieeeusa.org/2012/Apr/backscatter.asp>> Acesso em: 15/06/2018

▶ **Questão 21**

- (A) ought to know
- (B) must not know
- (C) should have known
- (D) will have known
- (E) may not know

Comentário:

○ autor diz supor que leitores mais jovens "talvez não conheçam": may not know.

Alternativa E

▶ **Questão 22**

- (A) Spotted by
 - (B) Unknown to
 - (C) Shadowed under
 - (D) Disguised as
 - (E) Characterized by
-

Comentário:

“Desconhecido” para os fãs e muitos amigos de Hollywood. *Unknown to*

Alternativa B

▶ **Questão 23**

- (A) before
 - (B) during
 - (C) for
 - (D) when
 - (E) after
-

Comentário:

Eles não sabiam “quando” as câmeras não estavam filmando. *When*

Alternativa D

▶ **Questão 24**

- (A) Despite
 - (B) Since
 - (C) Although
 - (D) Anyhow
 - (E) Unless
-

Comentário:

Apesar de ser um admirador. *Despite (being) an admirer... I too was... Despite*

Alternativa A

▶ **Questão 25**

- (A) transferred
 - (B) tackled
 - (C) addressed
 - (D) authorized
 - (E) issued
-

Comentário:

Uma patente foi criada, impressa para... *Issued* to

Alternativa E

▶ **Questão 26**

- (A) can have raged
 - (B) should have been raging
 - (C) would have raged
 - (D) had been raging
 - (E) could be raging
-

Comentário:

Enquanto a Guerra acontecia na Europa, uma ação passada anterior ao fato de ela mudar-se para os Estados Unidos, passado perfeito. *Had been raging*

Alternativa D

▶ Questão 27

- (A) exempted
- (B) designed
- (C) dismissed
- (D) entwined
- (E) chartered

Comentário:

NIC criado para avaliar tecnologias. NIC *chartered* to ...

Alternativa E

▶ Questão 28

- (A) owt
- (B) neither
- (C) both
- (D) any
- (E) each

Comentário:

Ela não fez nem uma coisa nem outra... She did *neither*...

Alternativa B

▶ Questão 29

- (A) wouldn't have been
- (B) could have been
- (C) must have never been
- (D) hadn't ever been
- (E) had almost been

Comentário:

Isto poderia ter sido... This *could have been*...

Alternativa B

▶ Questão 30

- (A) come up with
- (B) come down on
- (C) come through
- (D) come over
- (E) come about

Comentário:

Inspirou-a a aparecer, surgir com. Inspired her to *come up with*...

Alternativa A

Texto 2

CORPORATE CONTROL AND GLOBAL GOVERNANCE OF MARINE GENETIC RESOURCES

INTRODUCTION

The prospect of the ocean generating a new era of “blue growth” is increasingly finding its way into national and international policy documents around the world and has spurred a rush to claim ocean space and resources. If economic activities in coastal and offshore areas are to expand in an equitable and sustainable manner, in line with the Sustainable Development Goals (SDGs), progress is needed toward addressing multiple and potentially conflicting uses of ocean space within national jurisdictions, in addition to developing a consistent and transparent legal framework for the vast areas beyond national jurisdiction (ABNJ). These areas cover 64% of the world’s ocean and 47% of the Earth’s surface yet remain poorly understood or described.

Marine organisms have evolved to thrive in the extremes of pressure, temperature, chemistry, and darkness found in the ocean, resulting in unique adaptations that make them the object of commercial interest, particularly for biomedical and industrial applications. By 2025, the global market for marine biotechnology is projected to reach \$6.4 billion, spanning a broad range of commercial purposes for the pharmaceutical, biofuel, and chemical industries. One way to ensure exclusive access to these potential economic benefits is through patents associated with “marine genetic resources” (MGRs). Although the term MGRs has never been formally described, it suggests a subset of “genetic resources”, which have been defined under the Convention on Biological Diversity (CBD) as “genetic material of actual or potential value”. (33)____. The adoption of the Nagoya Protocol in 2010 represented an important step within the international policy arena to define obligations associated with monetary and nonmonetary benefit sharing of genetic resources and their products sourced from within national jurisdictions. No such mechanism currently exists for ABNJ.

(...)

BLASIAK, R.; JOUFFRAY, JB.; WABNITZ, C.; SUNDSTROM, E. e OSTERBLOM, H. Adaptado de **Corporate control and global governance of marine genetic resources**. In: Science Advances. Disponível em <<http://advances.sciencemag.org/content/4/6/eaar5237.full>>. Acesso em: 07/08/2018.

▶ **Questão 31**

Choose the correct option.

- (A) Ocean space and resources have had their ownership completely established.
- (B) There is no legal doctrine regarding the uses of ocean space beyond national jurisdiction.
- (C) Although “blue growth” is not economically attractive, some organizations need to own ocean space.
- (D) A good deal of knowledge has already been gathered about ocean space beyond national jurisdiction.
- (E) Corporate institutions have studied more than half of our planet's surface.

Comentário:

Nas linhas 6 e 7 fica claro que ainda é preciso criar-se uma estrutura legal transparente e consistente quanto a ABNJ.

Alternativa B

▶ **Questão 32**

Choose the correct option.

- (A) Corporations intend to use patents associated with deep-sea marine genetic resources to guarantee they are the only ones to profit.
- (B) Industries willing to use the genetic material of organisms which have adapted to deep sea environment must follow the Nagoya Protocol no matter where they are exploring the sea.
- (C) The international policy has already established the most profitable type of commercial use for some specific genetic resources.
- (D) Equitable and sustainable development depend on laws defining the non-commercial use of the genes from marine organisms.
- (E) Pharmaceutical, biofuel, and chemical industries are obliged to invest in a broad range of the marine environment until 2025.

Comentário:

A resposta a essa questão encontra-se nas linhas 5 e 6, em que é dito que “uma forma de assegurar acesso exclusivo a esses potenciais benefícios econômicos é por meio de patentes”.

Alternativa A

▶ Questão 33

Choose the appropriate continuation for “Although the term MGRs has never been formally described, it suggests a subset of ‘genetic resources,’ which have been defined under the Convention on Biological Diversity (CBD) as ‘genetic material of actual or potential value.’”

- (A) However, their substantial financial resources enable them to develop commercial applications despite uncertain timelines and returns on investment.
- (B) Past research has focused on countries where patents have been registered rather than the individual actors registering them.
- (C) Because of this, transnational corporations have a unique ability to capitalize on and monopolize markets characterized by global scope and complexity.
- (D) The registration of patent claims involving such resources constitutes an opaque and rapidly evolving frontier where the worlds of science, policy, and industry meet.
- (E) This facilitates the acquisition or collection of samples, for example, chartering vessels for a week-long sampling cruise of deep-water corals estimated in 2013 at \$455,000.

Comentário:

A continuação da frase anterior diz que embora o termo MGR nunca tenha sido formalmente descrito, o registro de patentes sobre tais recursos cria uma fronteira onde os mundos da ciência, indústria e política se encontram.

Alternativa D

PARA AS QUESTÕES 34 E 35, RESPONDA DE ACORDO COM O TEXTO 3 A SEGUIR.

Texto 3

THE DISCOVERY OF PENICILLIN – NEW INSIGHTS AFTER MORE THAN 75 YEARS OF CLINICAL USE

ABSTRACT

After just over 75 years of penicillin’s clinical use, the world can see that its impact was immediate and profound. In 1928, a chance event in Alexander Fleming’s London laboratory changed the course of medicine. However, the purification and first clinical use of penicillin would take more than a decade. Unprecedented United States/Great Britain cooperation to produce penicillin was incredibly successful by 1943. This success overshadowed efforts to produce penicillin during World War II in Europe, particularly in the Netherlands. Information about these efforts, available only in the last 10–15 years, provides new insights into the story of the first antibiotic. Researchers in the Netherlands produced penicillin using their own production methods and marketed it in 1946, which eventually increased the penicillin supply and decreased the price. The unusual serendipity involved in the discovery of penicillin demonstrates the difficulties in finding new antibiotics and should remind health professionals to expertly manage these extraordinary medicines.

(...)

GAYNES, R. *The Discovery of Penicillin-New Insights After More Than 75 Years of Clinical Use*. In: Science, 2017. Disponível em: <http://wwwnc.cdc.gov/eid/article/23/5/16-1556_article>. Acesso em: 26/06/2018.

▶ Questão 34

Choose the correct option.

- (A) Dutch researchers produced penicillin for it was cheaper than before. Concerning the supply of it, the increase was automatic.
- (B) The first clinical use of penicillin was not immediate owing to the impact of its discovery. This delay changed the History of Medicine.
- (C) The efforts by the Netherlands to produce the new drug weren't regarded as valuable until around a decade ago.
- (D) It is impossible that penicillin's first clinical use dates back more than 75 years.
- (E) The US and Great Britain succeeded in producing penicillin right after 1943.

Comentário:

Informações sobre esforços como os feitos pela Holanda só se tornaram disponíveis há cerca de 10 a 15 anos, ou seja, em torno de uma década atrás.

Alternativa C

▶ **Questão 35**

Choose the correct option.

The meaning of the word “serendipity” in the sentence: “The unusual serendipity involved in the discovery of penicillin demonstrates the difficulties in finding new antibiotics (...)” is:

- (A) strategy.
- (B) fluke.
- (C) nuisance.
- (D) plan.
- (E) mishap.

Comentário:

Questão de vocabulário.

Alternativa B

PARA AS QUESTÕES 36 a 40, RESPONDA DE ACORDO COM O TEXTO 4 A SEGUIR.

Texto 4

**FRANK WHITTLE AND THE INVENTION OF THE JET ENGINE:
SIX PLACES TO TRACE HIS GENIUS**

It was, in many ways, a very British sort of achievement. When the turbine began to spin on the “WU” – the prototype jet engine developed by the Coventry-born engineer Frank Whittle – it was a moment which changed the world. Had you been passing through the byways of Rugby, in Warwickshire, more than 80 years ago, you might even have heard it. A thrum of mechanics in sync, building and building, growing in intensity to become a roar; a giddy howl which would permanently alter the way we journey around our planet.

And yet it might so easily not have happened. Whittle’s triumph – on April 12, 1937 – was garnered in the face of official indifference and scientific doubt, and was only pulled off by a merest financial hair’s breadth, with the Second World War crowding in on all sides.

(...)

Here was a visionary who began fomenting his design for a jet engine as early as 1927, and patented it in 1930, yet had to swim against the current after seeing his idea pooh-poohed by the UK’s Air Ministry – which, upon seeing the blueprint in 1929, deemed it “impracticable.”

Undeterred, Whittle took his own path. In January 1936, he founded a private company, Power Jets Ltd, with aeronautical engineer Rolf Dudley Williams and retired RAF officer James Collingwood Tinning. With £2,000 of funding from O.T. Falk & Partners – an investment bank which was known for taking risks – the trio began converting what had been decried as fantasy into reality.

That first blur of blades as the WU (Whittle Unit) screamed into life was followed by a series of leaps forward. The Air Ministry placed its first order for Whittle’s brainwave in January 1940. The first jet-powered British plane took off from RAF Cranwell, Lincolnshire, on May 15, 1941. The rest is so much history.

None of this occurred in isolation. The story of the jet engine can never be told without mentions of Maxime Guillaume, who secured a French patent for a jet engine with a gas turbine in 1921 (no prototype was ever produced as it was beyond the scope of existing technology), and of Hans Von Ohain, who beat Whittle to the punch by building the first fully operational jet engine in 1939 as Germany chased advantages in the global conflict.

(...)

RAF = Royal Air Force

LEADBEATER, C. Adaptado de **Frank Whittle and the invention of the jet engine: Six places to trace his genius**. In: The Telegraph. Disponível em: <<https://www.telegraph.co.uk/travel/destinations/europe/united-kingdom/england/articles/frank-whittle-and-the-birth-of-the-jet-engine/>>. Acesso em: 08/06/2018.

▶ **Questão 36**

Choose the correct option.

- (A) Some 80 years ago, someone could have witnessed the jet engine tests if the person had been in Rugby.
- (B) The spinning of the turbine in 1937 would not be a milestone in history.
- (C) What happened in the city where Whittle was born changed the world 80 years after it, and this is very British.
- (D) Eventually, Whittle could prove there had been a reason for people to doubt his invention could work.
- (E) The giddy howl justified the existence of official indifference, but not the way we travel today.

Comentário:

A resposta está nas linhas 3 e 4 do texto. Se alguém estivesse passando pelos atalhos de Rugby, em Warwickshire, até poderia ouvir o que aconteceu.

Alternativa A

▶ Questão 37

Choose the correct option.

- (A) People seemed to want to sponsor Whittle. This is the only reason why his triumph was garnered.
- (B) Whittle triumphed a decade after he got funds to be invested in his project.
- (C) A large amount of money was available for his project before the Second World War began.
- (D) Whittle's problems had to do with low amount of money and contempt for his project.
- (E) If Williams and Tinling had been convinced of Whittle's ideas, they would have contributed to the project.

Comentário:

Pura interpretação. As dificuldades de Whittle advinham de seus poucos recursos e pelo desprezo por seu projeto.

Alternativa D

▶ Questão 38

Choose the correct option.

- (A) Whittle patented his invention right after the test proved he was right and, consequently, he had money to found a company.
- (B) Whittle had been swimming against the current for three years when the thrum that became a roar meant a real change in History.
- (C) It's not such a surprise O.T. Falk & Partners funded a project that had been seen with a certain disdain since it was a bank which took risks.
- (D) At the time Whittle's project was funded, another jet engine project had been patented in France ten years before. However, there was no prototype of that.
- (E) The institution that dismissed Whittle's ideas is not the same that ordered him a jet plane in 1940.

Comentário:

Pura interpretação. A resposta encontra-se no quarto parágrafo, linha 3.

Alternativa C

▶ Questão 39

Choose the correct option.

The sentence: "That first blur of blades as the WU (Whittle Unit) screamed into life was followed by a series of leaps forward" means that

- (A) after the project was conceived, there were many other difficulties.
- (B) in 1939, the gap between engine blades still had to be adjusted.
- (C) the British jet took off ten years after a number of mistakes occurred.
- (D) before 1940, the orders for what had been decried as fantasy were placed.
- (E) after the tests, a number of facts led to a positive progress.

Comentário:

Outra questão de simples interpretação. A resposta encontra-se no quinto parágrafo, linhas 1 e 2.

Alternativa E

▶ Questão 40

Choose the correct option.

- (A) The fact that more than a person developed ideas that couldn't be accomplished explains why Guillaume couldn't provide a prototype in 1921.
- (B) The story of the jet engine needs to mention the other people that were working together with Whittle's group in the WU (Whittle Unit).
- (C) The idea of sound appears three times in the text to refer to the fact that the project was accepted.
- (D) Whittle's building a prototype engine took place three years before Von Ohain's building an operational jet engine.
- (E) Von Ohain put his idea into practice to be used by England's enemy before Whittle and his partners.

Comentário:

Mais uma de simples interpretação, cuja resposta encontra-se no último parágrafo do texto.

Alternativa E

INGLÊS
Monster

Colaborador
Cirillo Sales

Digitação e Diagramação
Cristiane Ribeiro
Pollyanna Chagas

Revisor
Celso Faria

Projeto Gráfico
Vinicius Ribeiro

Supervisão Editorial
Aline Alkmin

Copyright©Olimpo2018

*A Resolução Comentada das provas do IME
poderá ser obtida diretamente no site do **GRUPO OLIMPO**.*

As escolhas que você fez nesta prova, assim como outras escolhas na vida, dependem de conhecimentos, competências, conhecimentos e habilidades específicos. Esteja preparado.

www.grupoolimpo.com.br