



"A matemática é o alfabeto com que Deus escreveu o mundo Galileu Galilei

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

Texto 1

## A DAY IN THE LIFE OF A NUCLEAR MATERIALS ENGINEER

- 1 My career (21) a planned one in any way. At school I was athletic; I ran and played badminton to a high standard when I was young and always thought my career would be a sporting one (22) I suffered an injury during my teens. The rest of my family was academic; my father was an aerodynamic engineer and my mother a mathematician, (23) my sister
- 5 studied geology.

At the age of 16, I attended a Women in Science and Engineering careers week with school, just to have a look at what was available. This helped me decide that (24) I really wanted to do was an engineering degree, so I chose to do a BEng in materials science and engineering at Liverpool University, and then went on to do a PhD.

10 My PhD looked at auxetic polymeric materials. No one (25) of them: they get fatter as you stretch them, (26) is very novel, and at the time there were only a handful of researchers in the world working on these. The PhD started my interest in polymeric materials. Towards the end of my PhD I (27) two research roles, and ended up taking a job with British Nuclear Fuels Limited at the Company Research Laboratory (CRL).

(...)

15 During my time at CRL I (28) on secondment to the Sellafield site in Cumbria, which then turned into a permanent position in the research and technology materials and inspection group. During this time I became a chartered engineer and a full professional member of the Institute of Materials Minerals and Mining. I now head up one of Sellafield's Centres of Expertise (CoE): I am the CoE lead and subject matter expert for polymeric materials. Recently 20 I (29) as a fellow of the Institute of Materials.

I definitely don't have a "typical day". I sometimes have a plan, but <u>(30)</u> stick to it as much of my work is responsive to situations which are transient. The range of things I can get involved in is huge and includes specifying materials for use in challenging environments, new plant designs and decommissioning activates.

RATHBONE, Penny. Adapted from: The Guardian. A day in the life of a nuclear materials engineer. Disponível em: <https://www.theguardian.com/women-in-leadership/2016/jan/22/aday-in-the-life-of-a-nuclear-materials-engineer>. Acesso em: 22/06/2017.

# Questão 21

- (A) is going to be
- (B) won't have been
- (C) has not been
- (D) could have been
- (E) may be

## Comentário:

- a) será. Referência ao futuro com going to.
- Errada. Terá sido. Referência ao futuro com o uso de Future Perfect. b)
- Correta. Referência ao passado utilizando o tempo verbal Present Perfect já que não há tempo definido. Na sequência o autor c) cita suas experiências quando era jovem.
- d) poderia ter sido
- e) pode ser

# Duestão 22

- (A) instead
- (B) rather
- (C) moreover
- (D) likewise
- (E) until

#### Comentário:

- a) Errada. em vez
- b) Errada. bastante
- c) Errada. além disso
- d) Errada. da mesma forma
- e) Correta. até.

## Alternativa E

# 🕨 🛛 🖉 🖉

- (A) while
- (B) unless
- (C) notwithstanding
- (D) partially
- (E) altogether

## Comentário:

- a) Correta. enquanto
- b) Errada. a não ser que
- c) Errada. não obstante
- d) Errada. parcialmente
- e) Errada. inteiramente

## Alternativa A

## **Q**uestão 24

- (A) as
- (B) if
- (C) mainly
- (D) inward
- (E) what

#### Comentário:

- a) Errada. como
- b) Errada. se
- c) Errada. principalmente
- d) Errada. intimo
- e) Correta. o que

## Alternativa E

# 🕨 🛛 Questão 25

- (A) hasn't ever heard
- (B) ever heard
- (C) had ever heard
- (D) wasn't ever heard
- (E) had ever been heard

## Comentário:

- a) Errada. Não se pode negar duas vezes.
- b) Errada. falta o verbo auxiliar
- c) Correta. Past Perfect. Uma situação anterior a uma outra também no passado.
- d) Errada. Voz passiva utilizando Past simple e não há a ideia de sofrer a ação
- e) Errada. Voz passiva utilizando Past perfect e não há a ideia de sofrer a ação.

#### Alternativa C

# **Q**uestão 26

- (A) that
- (B) when
- (C) who
- (D) which
- (E) whose

# Comentário:

a) Errada. Caso de Non-defining relative clause. Pronome relativo that, apesar de poder se referir a objeto, não pode ser usado nesse caso.

b) Errada. quando

- c) Errada. quem
- d) Certa. Non-defining relative clause. Pronome relativo refere-se a objeto.
- e) Errada. cuja

# Alternativa D

# 🕨 Questão 27

- (A) stood by
- (B) reached out
- (C) tried off
- (D) focused on
- (E) applied for

#### Comentário:

- a) Errada. estive presente
- b) Errada. alcancei
- c) Errada. experimentar
- d) Errada. foquei em
- e) Correta. me candidatei para

#### Alternativa E

Questão 28

- (A) sent
- (B) was sent
- (C) have sent
- (D) have been sending
- (E) am to be sent

## Comentário:

- a) Errada. Enviei (Past Simple)
- b) Correta. fui enviado. Voz passiva com a utilização de Past Simple. Tempo determinado (During my time)
- c) Errada. enviei ( Present Perfect)
- d) Errada. estava enviando (Past Continuous)
- e) Errada. Tivesse que ser enviado

## Alternativa B

## 🕨 🛛 Questão 29

- (A) have recognised
- (B) have been recognised
- (C) might have recognised
- (D) had recognised
- (E) was being recognised

## Comentário:

- a) Errada. reconheci
- b) Correta. fui reconhecido (Passive voice utilizando Present perfect justificada pela expressão de tempo recently.)
- c) Errada. poderia ter sido reconhecido
- d) Errada. tinha reconhecido
- e) Errada. estava sendo reconhecido

#### Alternativa B

## 🕨 Questão 30

- (A) rarely
- (B) endlessly
- (C) daintily
- (D) primarily
- (E) chiefly

# Comentário:

- a) Correta. raramente
- b) Errada. incessantemente
- c) Errada. delicadamente
- d) Errada. principalmente
- e) Errada. sobretudo

### Alternativa A

# PARA AS QUESTÕES 31 a 37, RESPONDA DE ACORDO COM O TEXTO 2 A SEGUIR.

## Texto 2

# HYPATIA OF ALEXANDRIA

- 1 Hypatia of Alexandria (c. 370 CE March 415 CE) was a female philosopher and mathematician, born in Alexandria, Egypt possibly in 370 CE (although some scholars cite her birth as c. 350 CE). She was the daughter of the mathematician Theon, the last Professor at the University of Alexandria, who tutored her in math, astronomy, and the philosophy of the day
- 5 which, in modern times, would be considered science. Nothing is known of her mother and there is little information about her life. As the historian Deakin writes, "The most detailed accounts we have of Hypatia's life are the records of her death. We learn more about her death from the primary sources than we do about any other aspect of her life". She was murdered in 415 CE by a Christian mob who attacked her on the streets of Alexandria. The primary
- 10 sources, even those Christian writers who were hostile to her and claimed she was a witch, portray her as a woman who was widely known for her generosity, love of learning, and expertise in teaching in the subjects of Neo-Platonism, mathematics, science, and philosophy in general.

In a city which was becoming increasingly diverse religiously (and had always been so

- culturally) Hypatia was a close friend of the pagan prefect Orestes and was blamed by Cyril, the Christian Archbishop of Alexandria, for keeping Orestes from accepting the 'true faith'. She was also seen as a 'stumbling block' to those who would have accepted the 'truth' of Christianity were it not for her charisma, charm, and excellence in making difficult mathematical and philosophical concepts understandable to her students; concepts which
- contradicted the teachings of the relatively new church. Alexandria was a great seat of learning in the early days of Christianity but, as the faith grew in adherents and power, steadily became divided by fighting among religious factions. It is by no means an exaggeration to state that Alexandria was destroyed as a centre of culture and learning by religious intolerance, and Hypatia has come to symbolize this tragedy to the extent that her death has been cited as the
  - end of the classical world.
- By all accounts, Hypatia was an extraordinary woman <u>(36)</u>. Theon refused to impose upon his daughter the traditional role assigned to women and raised her as one would have raised a son in the Greek tradition; by teaching her his own trade. The historian Slatkin writes, "Greek women of all classes were occupied with the same type of work, mostly
- centered around the domestic needs of the family. Women cared for young children, nursed the sick, and prepared food". Hypatia, on the other hand, led the life of a respected academic at Alexandria's university; a position to which, as far as the evidence suggests, only males were entitled previously. She never married and remained celibate throughout her life, devoting herself to learning and teaching. The ancient writers are in agreement that she was a woman
  - of enormous intellectual power. Deakin writes:
- 35 "The breadth of her interests is most impressive. Within mathematics, she wrote or lectured on astronomy (including its observational aspects - the astrolabe), geometry (and for its day advanced geometry at that) and algebra (again, for its time, difficult algebra), and made an advance in computational technique - all this as well as engaging in religious philosophy and
- aspiring to a good writing style. Her writings were, as best we can judge, an outgrowth of her teaching in the
  technical areas of mathematics. In effect, she was continuing a program initiated by her father: a conscious effort
  to preserve and to elucidate the great mathematical works of the Alexandrian heritage."

CE = Common Era, the same as AD, Anno Domini.

<sup>(</sup>MARK, Joshua J. **Hypatia of Alexandria**. In: Ancient History Encyclopedia, 2017. Disponível em: <a href="http://www.ancient.eu/Hypatia\_of\_Alexandria/">http://www.ancient.eu/Hypatia\_of\_Alexandria/</a>>. Acesso em: 20/06/2017.)

# 🕨 Questão 31

Choose the correct option.

- (A) Hypatia's father taught her some subjects.
- (B) Hypatia's father was the first philosopher at the University of Alexandria.
- (C) Since Hypatia and her mother didn't live together, not much is know about them.
- (D) Hypatia died when she was about 80 years old.
- (E) Hypatia and her father had different interests.

## Comentário:

Na passagem "She was the daughter of the mathematician Theon, the last Professor at the University of Alexandria, who tutored her in math, astronomy, and the philosophy of the day which, in modern times, would be considered science.", entendemos que seu pai foi seu tutor em matemática, astronomia e filosofia.

## Alternativa A

# 🕨 🛛 Questão 32

Choose the correct option.

- (A) Hypatia was considered a witch because of her knowledge in math.
- (B) Deakin disagreed with some sources of information.
- (C) To one of the historians, there is more specific information about Hypatia's death than about her life.
- (D) All the ones who disliked Hypatia didn't make positive comments about her character.
- (E) Hypatia was cherished by a Christian throng for her love of learning.

#### Comentário:

Na passagem "The most detailed accounts we have of Hypatia's life are the records of her death. We learn more about her death from the primary sources than we do about any other aspect of her life". temos como tradução que aprendemos mais sobre a morte de Hypatia do que qualquer outro aspecto de sua vida.

## Alternativa C

# 🕨 🛛 Questão 33

Choose the correct option.

- (A) Never had so many diverse cultural groups been observed in Alexandria at the same time.
- (B) In Cyril's opinion, if it were not for Hypatia, Orestes would have accepted the real religion.
- (C) Orestes thought Hypatia favoured Cyril in some aspects, and she was blamed for that.
- (D) The number of different religions was decreasing at that time in Alexandria.
- (E) Alexandria's culture and learning was built from religious precept.

#### Comentário:

Na passage "Hypatia" was a close friend of the pagan prefect Orestes and was blamed by Cyril, the Christian Archbishop of Alexandria, for keeping Orestes from accepting the 'true faith'", entendemos que Hypatia foi acusada de impedir Orestes de aceitar a verdadeira fé.

## Alternativa B

# Duestão 34

Choose the correct option.

- (A) Hypatia did not marry so she could study; consequently, she followed the role model of the time.
- (B) Although Hypatia remained celibate, her father had been doubtful she would ever do so because of the activities society expected her to perform.
- (C) Professions were chosen according to the social class a woman occupied, centered around family tradition and faith.
- (D) Not many gaps have to be filled about Hypatia's academic life now; we know almost everything because she continued her father's work.
- (E) Some people didn't seem to understand science regardless of religion, and this might explain why scientific concepts were seen as an obstacle.

### Comentário:

Na passagem, "...concepts which contradicted the teachings of the relatively new church. Alexandria was a great seat of learning in the early days of Christianity but, as the faith grew in adherents and power, steadily became divided by fighting among religious factions", entendemos que apesar de Alexandria ter sido um local de muito aprendizado no começo do Cristianismo, tais conceitos contradiziam a nova igreja e como a fé crescia em adeptos, eles progressivamente deixavam de brigar com as facções religiosas.

#### Alternativa E

# 🕨 Questão 35

Choose a synonym for the expression **to the extent that** in the sentence " (...) Hypatia has come to symbolize this tragedy **to the extent that** her death has been cited as the end of the classical world." in lines 24 and 25.

- (A) as well as
- (B) in contempt of
- (C) by easy stages
- (D) for the record that
- (E) to the degree that

#### Comentário:

- A) Errada. assim como
- B) Errada. em desprezo ao
- C) Errada. despreocupadamente
- D) Errada. constatando, registrando
- E) Correta. A tal grau que, a tal ponto que

## Alternativa E

# 🕨 🛛 🖉 🖉

Choose the appropriate continuation for the sentence "By all accounts, Hypatia was an extraordinary woman \_\_\_\_\_\_" in line 26.

- (A) since she was assigned a profession different from her father's.
- (B) not only for her time, but for any time.
- (C) as she lived for the Gods.
- (D) devoted to teaching, which was a common activitiy for women at that time.
- (E) of slight intellectual power.

#### Comentário:

Na passagem "She was also seen as a 'stumbling block' to those who would have accepted the 'truth' of Christianity were it not for her charisma, charm, and excellence in making difficult mathematical and philosophical concepts understandable to her students", entendemos que Hypatia era uma pessoa carismática, charmosa e sua excelência ao tornar conceitos matemáticos e filosóficos difíceis em conceitos compreensíveis fez toda a diferença.

#### Alternativa B

# Duestão 37

Choose the correct meaning of **outgrowth** in the sentence "Her writings were, as best we can judge, an **outgrowth** of her teaching (...)" in lines 40 and 41.

- (A) reason
- (B) rebuttal
- (C) motivation
- (D) result
- (E) concession

#### Comentário:

- A) Errada. razão
- B) Errada. refutação
- C) Errada. motivação
- D) Correta. outgrowth tem por tradução resultado, a mesma tradução que a palavra result
- E) Errada. concessão

## Alternativa D

# PARA AS QUESTÕES 38 a 40 , RESPONDA DE ACORDO COM O TEXTO 3 A SEGUIR.

## Texto 3

# COULD THIS CATERPILLAR HELP SOLVE THE WORLD'S PLASTIC BAG PROBLEM?

1 A developmental biologist and amateur beekeeper has come up with a new way to get rid of used plastic bags: Make waxworms eat them. The larvae of the greater wax moth (Galleria mellonella), these caterpillars thrive on beeswax. While cleaning out empty hive boxes that were infested with these caterpillars, Federica Bertocchini of the Institute of Biomedicine and

Biotechnology of Cantabria in Spain put them in a plastic grocery bag. To her surprise the waxworms quickly ate their way out,

5 leaving the bag riddled with holes. It turns out the caterpillars can break down the bag's polyethylene into ethylene glycol, which can be readily converted into useful substances such as antifreeze, the team reports today in Current Biology. Polyethylene is very hard to break down making the 80 million tons produced a year a

big recycling challenge. Only recently have researchers begun to make progress doing so, and this caterpillar may be another solution.

(PENNISI, Elizabeth. Adapted from: Science. **Could this caterpillar help solve the world's plastic bag problem?** In: Science, 2017. Disponível em: <a href="http://www.sciencemag.org/news/2017/04/could-caterpillar-help-solve-world-s-plastic-bag-problem">http://www.sciencemag.org/news/2017/04/could-caterpillar-help-solve-world-s-plastic-bag-problem</a>. Acesso em: 26/06/2017.)

# 🕨 Questão 38

Choose the correct option.

- (A) A scientist discovered by chance that waxworms might help eliminate plastic.
- (B) The beginning biologist is a neophyte in raising honeybees in Cantabria.
- (C) If the woman hadn't cleaned the boxes, the larvae wouldn't have become moths.
- (D) Federica's discovery has to do with previous scientific research.
- (E) The biologist's experience led her use the larvae in the hive.

### Comentário:

Na passagem "While cleaning out empty hive boxes that were infested with these caterpillars, Federica Bertocchini of the Institute of Biomedicine and Biotechnology of Cantabria in Spain put them in a plastic grocery bag. To her surprise the waxworms quickly ate their way out, leaving the bag riddled with holes", entendemos que enquanto limpava colmeias vazias que estavam infestadas de lagartas, Federica as colocou em uma sacola plástica e para sua surpresa os insetos a deixaram repleta de furos.

## Alternativa A

# 🕨 🛛 Questão 39

Choose the correct option:

- (A) Waxworms needed help so they could leave the plastic bag.
- (B) The larvae used wax to leave the bag.
- (C) The consumptiom of wax by the worms produced holes.
- (D) The waxworms ate plastic thus creating holes.
- (E) Larvae help develop bees wax, and this leads to plastic bag decomposition.

#### Comentário:

Na passagem "To her surprise the waxworms quickly ate their way out, leaving the bag riddled with holes", entendemos que os insetos deixaram a sacola plástica repleta de furos.

### Alternativa D

# 🕨 🛛 Questão 40

Choose the correct option.

- (A) Caterpillars seem to transform plastic into another substance, so they drew people's attention.
- (B) Worms can produce polyethylene out of plastic and make it react with the atmosphere before eating.
- (C) Ethylene glycol can be transformed into a substance that worms use later on.
- (D) Waxworms produce antifreeze as a result of cleaning empty hive boxes.
- (E) Ethylene glycol is important for the worm's warmth maintenance.

#### Comentário:

Na passagem "It turns out the caterpillars can break down the bag's polyethylene into ethylene glycol..." entendemos que verificou-se que as lagartas podem quebrar o polietileno da sacola plástica em glicol etileno.

#### Alternativa A

INGLÊS Carla

#### Colaboradores Aline Alkmin

Cirillo Sales

## Digitação e Diagramação Kleuber Umberto

Kleuber Umberto Márcia Santana

> **Revisor** Celso Faria

Projeto Gráfico Vinicius Ribeiro

Supervisão Editorial Aline Alkmin Rodrigo Bernadelli

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