



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

▶ Questão 16

Para as questões de 16 a 25, leia o texto seguinte e complete as lacunas com a palavra ou expressão correta.

Atmospheric Physics is the study of physical processes in the atmosphere; understanding the climate and the weather, and the physical reasons ____16____ it is as it is and how it might change in the future.

My own particular research background is in radiative transfer and ____17____ I mean the transport of electromagnetic radiation through the atmosphere; ____18____ the Sun's radiation coming in, getting absorbed and scattered in the air, and the transfer of heat radiation emitted by the Earth's surface.

From a ____19____ physics perspective there's an awful lot of things about the atmosphere that we don't understand, and of course, it's very classical physics in the ____20____ that it's looking at fluid dynamics and thermodynamics applied to the natural environment. What motivates us really is to try and explain what we see in the environment, what ____21____ it and what might change it in the future, both in ____22____ of local weather but also climate, by ____23____ I mean larger areas and larger timescales.

My background has led me to an interest in how solar radiation ____24____ in the atmosphere, so ____25____ at how changes in the Sun might affect the climate for the past year.

- A) as
- B) because
- C) for
- D) why
- E) that

Comentário:

A frase seria: "as razões físicas porque é como é..." Why funciona como pronome relativo na oração.

Alternativa D

▶ Questão 17

- A) these
- B) as long as
- C) as soon as
- D) which
- E) by that

Comentário:

"By that é uma expressão equivalente a "por aquilo"

Alternativa E

▶ Questão 18

- A) both
- B) neither
- C) if
- D) but
- E) not only

Comentário:

Expressão "Tanto...quanto" "Both...and".

Alternativa A

▶ **Questão 19**

- A) purposely
- B) possibly
- C) purely
- D) poorly
- E) previously

Comentário:

"De uma perspectiva puramente física..." é a frase que inicia o terceiro parágrafo.

Alternativa C

▶ **Questão 20**

- A) away
- B) sense
- C) meaning
- D) understand
- E) definition

Comentário:

"... é física clássica no sentido que..."

Alternativa B

▶ **Questão 21**

- A) affections
- B) cause
- C) effects
- D) affects
- E) demands

Comentário:

"O que afeta o ambiente..."

Alternativa D

▶ **Questão 22**

- A) units
- B) reference
- C) relation
- D) conditions
- E) terms

Comentário:

"...tanto em termos de tempo local quanto..."

Alternativa E

▶ **Questão 23**

- A) which
- B) who
- C) whom
- D) whose
- E) whether

Comentário:

Pronome relativo precedido de preposição e com antecedente não-pessoa: which.

Alternativa A

▶ **Questão 24**

- A) absorbed
- B) is absorbing
- C) has absorbed
- D) is absorbed
- E) absorbs

Comentário:

"...a radiação solar é absorvida..." Voz passiva.

Alternativa D

▶ **Questão 25**

- A) I had looked
- B) I've been looking
- C) I look
- D) I will look
- E) I haven't looked

Comentário:

Ação continuada em um passado não determinado. Presente perfeito contínuo.

Alternativa B

▶ **Questão 26**

Para as questões de 26 a 30, encontram-se em destaque cinco termos ou expressões. Assinale a alternativa correspondente ao termo cujo emprego está **INCORRETO**.

Whether you are **interested in reconnecting** with friends, **and wish** to organize a class reunion, the Alumni Relations team is here to help.

- A) interested
- B) in
- C) reconnecting
- D) and
- E) wish

Comentário:

"A questão diz que caso você esteja interessado em rever amigos ou organizar uma reunião de turma..."

Alternativa D

▶ **Questão 27**

Delhi, Kolkata and Mumbai are home **to** three **brands** new **chapters as** part of the **expanding** Imperial College Teachers' Association.

- A) to
- B) brands
- C) chapters
- D) as
- E) expanding

Comentário:

Brand funciona como adjetivo, portanto não pode ser grafado com "s" em inglês, mesmo que se refira a um substantivo no plural.

Alternativa B

▶ **Questão 28**

After **dining**, Richard Flaming, a mechanical engineer, described his **10-year** odyssey **to** break the wind powered land speed **recording** at 126.2 mph, **on** March 20th.

- A) dining
- B) 10-year
- C) to
- D) recording
- E) on

Comentário:

A expressão correta deveria ser "speed record".

Alternativa D

▶ **Questão 29**

I am currently **studying** for a PhD at the British Antarctic Survey **working** on the structural interpretation of gravity and magnetic **going** from east Antarctica, **including** both numerical and mechanical **modelling** of data.

- A) studying
- B) working
- C) going
- D) including
- E) modelling

Comentário:

A expressão correta seria "coming" e não "going".

Alternativa C

▶ **Questão 30**

Professor David Barry is a theoretical high-energy physicist and **his work interest lays in** the field of phenomenology in high energy collisions.

- A) his
- B) work
- C) interest
- D) lays
- E) in

Comentário:

Na expressão indicada, o *phrasal* "lie in" é mais comumente utilizado, ao passo que *lay in* não apresenta significado condizente com o contexto, pois significa armazenar.

Alternativa D

▶ **Questão 31**

Para as questões 31 a 40, leia os excertos e marque a opção com a resposta correta.

Torrential rain broke briefly on January 23rd, 2010. Nevertheless, 33 stalwarts of the Military Institute of Engineering kept on gathering and reminiscing.

What can be understood by the passage?

- A) In spite of the tempest, the gathering took place as planned.
- B) The torrential rain expected happened to pour lightly.
- C) Due to torrential rain just 33 people showed up.
- D) Heavy rains disturbed the meeting.
- E) The purpose of the gathering was observing the rain while telling of past experiences.

Comentário:

Resolução: Somente a opção A mantém a adversidade entre as duas ideias principais do texto, estando condizente com a informação.

Alternativa A

▶ Questão 32

On the mountain slopes south of Pompeii, a group of Roman citizens flee the doomed city, leaving their footprints in a layer of volcanic ash. Two thousand years later the footprints are rediscovered, and a joint Anglo-Italian dig is set up. Eminent Oxford archaeologist, Professor Julian Lockhart, unearths an exciting finding, but then he vanishes mysteriously. English detectives Nick Roberts and Lucia Fabri go out to assist the Italian police with the investigation, unaware of the sinister forces – both human and natural – that lie in wait for them. Their subsequent race for survival sweeps them up in an eerie reenactment of historical events.

A synonym for the word 'flee' is

- A) arrive
- B) investigate
- C) run away
- D) meet
- E) face

Comentário:

Resolução: O verbo *flee*, de acordo com o *Macmillan Dictionary*, é sinônimo de *run away*.

Alternativa C

▶ Questão 33

The passage can most probably be found in

- A) a comic book
- B) a message board in the police department
- C) the obituary notice of a newspaper
- D) a tourism and travel tips brochure
- E) the review column of a magazine

Comentário:

Resolução: O texto apresentado é um resumo de uma narrativa, que pode ser parte de uma resenha, o que conduz à alternativa E.

Alternativa E

▶ Questão 34

About the passage, it is correct to affirm that

- A) Pompeii mountain slopes are made of volcanic ashes.
- B) ancient footprints led to an exciting discovery.
- C) footprints found two hundred years before reunited archaeologists from two countries.
- D) Roman inhabitants sweep volcanic ashes two thousand years after the volcano burst.
- E) Anglo-Italian team members dig the ashes in search of a detective.

Comentário:

Resolução: a alternativa B é a única que traz a mesma informação contida no texto, fazendo uso de sinônimos em sua construção.

Alternativa B

▶ Questão 35

About Professor Julian Lockhart it is known that he

- A) passed away.
- B) is a mysterious archeologist.
- C) investigates intriguing vanishings.
- D) was killed in a volcano eruption.
- E) disappeared.

Comentário:

Resolução: o texto informa o desaparecimento de Julian Lockhart por meio do verbo *vanish*, que é sinônimo de *disappear*.

Alternativa E

▶ **Questão 36**

About the English detectives it is possible to infer that they

- A) solved the mystery.
- B) are unable to face sinister forces.
- C) lied to the Italian police.
- D) are part of an Anglo-Italian team.
- E) investigate footprints left in a layer of volcanic ash.

Comentário:

Resolução: nas linhas finais da passagem, vemos que os detetives ingleses foram trabalhar em conjunto com os italianos.

Alternativa D

▶ **Questão 37**

When I qualified as a military engineer, the wise old colonel who gave me my insignias said: "When you get to the front line, you will feel fear, but remember this: never fear the enemy, never fear the danger, only fear letting down those who have gone before you."

Which of the following comments could follow the previous scene?

- A) And that is what leaders call loneliness: its first aspect is that it is something that one really feels in times of crisis, when the sky is falling in around you and you are the only one who can make a decision as long as you are the first in command.
- B) And that is what leaders call humor: it is one of the things that I set great store by. A little bit of humor at a time of crisis often just lifts the mood and gets you focused on something else.
- C) And that is what leaders call heritage: the sense of not just doing a job in the here and now, you belonging to something that's got a fantastic foundation, and you feel responsible for its future.
- D) And that is what leaders call adaptability: it takes very different qualities to command a platoon at war, which is a tactical activity, and run a major change program in a large organization, which has to do with a more strategic leadership.
- E) And that is what leaders call delegation: delegators have a huge responsibility in terms of judging the capability and competence of the people that they are giving the jobs to.

Comentário:

Resolução: a alternativa C serve de sequência para o texto desta questão porque trata de herança e de um senso de equipe e responsabilidade, temas que estão conectados com o conselho recebido pelo engenheiro militar que narra a passagem.

Alternativa C

▶ **Questão 38**

Mars was warm enough to sustain lakes three billion years ago during the Hesperian Epoch, a period that was previously thought to be too cold and arid to sustain water on the surface, suggested a research published this January in the journal *Geology*. Dr Nicholas Warner, from the Department of Earth Science Engineering, said: "Most of the research on Mars has focused on its early history and the recent past. Scientists had largely overlooked the Hesperian Epoch as it was thought that Mars was then a frozen wasteland. Excitingly, our study now shows that this middle period in Mars' history was much more dynamic than we previously imagined."

Which of the following alternatives is **WRONG**, according to the passage?

- A) The passage alludes to three different intervals of time in Mars' history.
- B) During the Hesperian Epoch, Mars was too cold and arid, clearing the possibility of lakes existence.
- C) Scientists in general used to neglect Mars' Hesperian Epoch.
- D) Mars has not always been a frozen wasteland.
- E) The Hesperian Epoch dates to three billion years ago.

Comentário:

Resolução: Logo em sua introdução, o texto traz a informação de que Marte possuía clima ameno o suficiente para ter lagos durante o referido período, o que contradiz claramente a informação trazida na opção B.

Alternativa B

▶ Questão 39

The meaning of **overlook** in the passage is

- A) look at carefully
- B) rise above
- C) afford a view of from above
- D) look at from above
- E) fail to notice

Comentário:

O uso do prefixo *-over* na construção do verbo *overlook* define o sentido de verificar superficialmente, deixar passar.

Alternativa E

▶ Questão 40

Dr Molly Stevens and her team in the Department of Materials and the Institute of Biomedical Engineering moved one step closer to understanding how to grow replacement bones with stem cell technology in July 2009. Dr Stevens, whose study was published in the journal *Nature Materials*, compared the 'bone-like' material grown from three different, commonly used, clinically relevant cell types and discovered that the materials that were grown from mouse skull and bone marrow stem cells successfully mimicked many of the hallmarks of real bone. She says: "It brings us one step closer to developing materials that will have the highest chance of success when implanted into patients."

Which of the following headings is suitable to the passage?

- A) Scientists edge closer to implantable bone material.
- B) Scientists successfully implant bone marrow stem cells into patients.
- C) Bone-like material grown from mouse skull implanted into patients.
- D) Implanting replacement bones into mouse skull.
- E) Patient grew bone-like material from stem cell implanted by scientists.

Comentário:

A alternativa A constitui uma manchete adequada para o texto da questão porque, ao contrário das demais, não contradiz o conteúdo, referindo-se ao fato de que os cientistas estão próximos de conseguir a produção de tecido ósseo para se enxertado.

Alternativa A

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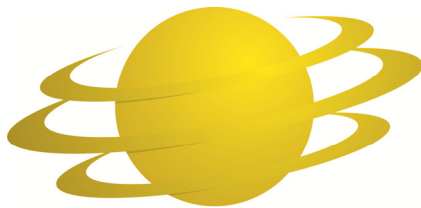
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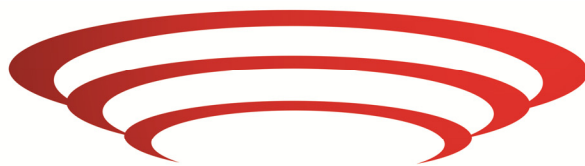
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