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#### GRAMMAR

Complete the article by filling the gaps with the proper verb form or verb tense. Write your answers in the spaces below the article.

Example: (00) think

#### Latest product for 3D printing: your teeth

The latest 3D printing innovation could change the way you  $\underline{-00}$  (think) about your visit to the dentist. That's because Dutch researchers at the University of Groningen  $\underline{-01}$  (work) on the creation of a 3D-printed tooth made of an antimicrobial plastic that  $\underline{-02}$  (kill) the bacteria responsible for tooth decay on contact.

For the Dutch researchers, the key step in developing the bacteria-fighting tooth  $\underline{-03}$  – (find, can) the right material to put inside the 3D printer. In this case, the researchers embedded antimicrobial quaternary ammonium slats inside existing dental resin polymers. Once this mix  $\underline{-04}$  – (put) into a 3D printer, it  $\underline{-05}$  – (harden, can) with ultraviolet light and used to print out 3D replacement teeth.

 $\underline{-06}$  – (test) the bacteria fighting tooth in a lab environment, the researchers coated the material with human saliva and exposed it to the bacterium that causes tooth decay. The anti-bacterial tooth killed more than 99% of all bacteria and showed no signs of – 07 – (be) harmful to human cells.

However, there is still a long way to go before this 3D-printing scenario becomes a reality. The Dutch 3D-printing innovation, for example, is still not ready for clinical trials and  $\underline{-08}$  (test, yet, not) inside a human mouth. Moreover, it's not clear how the tooth might react to brushing and the application of toothpaste.

Despite these obstacles, Andreas Herrmann of the University of Groningen in the Netherlands suggests that 'It's a medical product with a foreseeable application in the near future, much less time than -09 - (develop) a new drug'.

There's room for optimism because the role of 3D printing within the field of dentistry shows signs of taking off. In early March, 3D printing company Stratasys unveiled a high-end dental 3D printer, called the Object260 Dental Selection, capable of printing out realistic teeth, gums and nerves in order  $\frac{10}{10}$  (create) lifelike models for dental specialists. The printer  $\frac{11}{10}$  (use) the company's PolyJet dental materials, promising 'gum-like softness and colour', a 'range of natural tooth shades' and even nerve canals for dental models so realistic that practitioners can use them  $\frac{12}{10}$  (model) complicated dental procedures.

Those are just dental models and  $\underline{-13}$  – (intend, not) for clinical trials. However, it's hard  $\underline{-14}$  – (deny) the growing role of 3D printers in medicine and dentistry. Using 3D printers, there are ongoing attempts to 'bioprint' human bone, skin, tissue and even organs. According to research firm IDTechEx, the dental and medical market for 3D printers  $\underline{-15}$  – (grow, can) in size to \$867m by 2025.

08	Total Points:/15pts
07	15
06	14
05	13
04	12
03	11
02	10
01	09

Participant's Number:
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### VOCABULARY

Read the article below. Use the word given in CAPITALS at the end of each line to form a word that fits in the space in the same line. Write your answers in the spaces provided. Be mindful of spelling!

Jeremy Hunt, the health secretary, is considering whether to charge $\underline{-00}$ for using ambulances and	FOREIGN	00foreigners
visiting A&E in a move that could escalate $\underline{-01}$	TENSE	01
with the medical profession. In a bid to raise money,	~~~~~	0.0
Hunt is expected to announce a $-02$ – within the next	CONSULT	02
few weeks on whether the NHS should charge patients	EGONOLO	0.2
from outside the European $-03$ – Area (EEA) for	ECONOMY	03
emergency treatment.		
While no one would be denied urgent care, hospitals	HOLD	0.4
would be allowed to <u>-04 -</u> treatment for non-urgent	HOLD	04
medical problems until a $\underline{-05}$ was made. Patients from	PAY	05
inside the EEA would have to present their European health insurance card to <u>-06</u> - treatment, and their	RECEIPT	06
government would be sent a bill. There would be certain	KECEIF I	00
- 07 – on charging upfront, such as women in labour,	EXEMPT	07
while asylum $-08$ – would be excluded from the systems.		08
The government has announced a number of $-09$ –	CRACK	09
on so-called health tourism focused on $-10$ – current	ENFORCE	10
rules on foreigners being billed for routine care. That	LITTORCL	10
has led to warnings from doctors' groups that $-11$ –	MEDICINE	11
should not be forced to act as border guards by checking o		11
- 12 – before treatment. The British Medical Association		12
warned in April that new $-13$ – asking the NHS to require		13
<u>- 14 - of residence should not interfere with doctors'</u>	PROVE	14
primary duty to care for patients.		
The proposals are $-15$ – to lead to warnings against	LIKE	15
the UK moving towards a US-style system <u>– 16 –</u>	WHERE	16
patients are asked to pay before treatment. Hunt is already		
in a battle with junior doctors over new contracts.		
The move is being considered amid severe $\underline{-17}$	PRESS	17
on NHS funding, with warnings of an $-18 - £30$ bn	ANNUITY	18
<u>– 19 –</u> in the next parliament. Spending on healthcare	SHORT	19
is ring-fenced from spending cuts, but demographic chang		
mean the department is still looking for $\underline{-20}$ . Its	SAVE	20
estimates suggest that the extra charges for foreigners		
could save around £300m a year.		

Total Points: ...../10pts

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#### READING COMPREHENSION

Read the article about a palaeontologist who has been faulted for rushing procedures. For questions 01-10, decide which of the sentences (A-M) above the article best fits into each of the numbered gap in the article and write the letter next to their respective numbers below the text. There are three extra sentences.

- **A.** that could damage our attempts
- **B.** that are blamed on the speed
- **C.** before he scanned them
- **D.** uncovered several thousand bones of ancient humans
- **E.** publish their results in an open-access journal
- **F.** that was widely used by amateur cavers
- **G.** that he has not been able to date his finds
- **H.** to which he invited all interested specialists
- I. their analyses published
- **J.** that took more than seven years to publish
- **K.** senior experts take to study a single skeleton
- L. the bones belong to an already known species of human
- M. that they get to handle them

It remains one of the most dramatic human fossil finds of recent years. In 2013, in a tiny, cramped chamber in the Rising Star cave near Johannesburg, researchers led by palaeontologist Lee Berger <u>-01</u>. The team now concludes that these are the remains of a previously unknown species, *Homo naledi*.

The news, announced in September, made headlines around the world. However, the discovery has since become mired in controversy. Some scientists claim  $\underline{-02}$ , Homo erectus. Others have criticised Berger for claiming that the remains come from a deliberate burial, while several have complained  $\underline{-03}$ .

But the real controversy has been over how Berger revealed his work. Palaeontology is a field of science noted for the amount of time  $\underline{-04}$  before publishing their results in an established peer-reviewed journal. Some take more than a decade to do so.

By contrast, Berger and his colleagues have acted with extraordinary rapidity, under the glare of National Geographic cameras, using teams of young researchers to help  $\underline{-05}$  while offering files that can be used to make 3D copies of Naledi skulls and bones. To say that old-school fossil-hunters disapprove would be something of an understatement.

Many senior palaeontologists believe the way the Naledi finds were revealed and analysed – in less than two years – represents a dangerous precedent, 'a media circus' that threatens to split palaeontology into old and new schools and  $\underline{-06}$  to understand the path of human evolution. Others believe it could provide the field with a major boost. Among the critics is palaeontologist Tim White of the University of California, Berkeley. 'There are many things wrong with the way we proceed in palaeontology today, in particular the slowness involved in getting discoveries and  $\underline{-07}$ ,' he said. 'But making sure you have got things right is also of critical importance, particularly in a science in which there are so few specimens left of any species. Rushing things, in particular to suit film-makers, is very dangerous.'

White took 15 years to publish his findings about the early apeman  $Ardipithecus\ ramidus$ . This included the three years that he took to remove its 4.4 m-year-old bones from the ground in the Afar Rift in north-eastern Ethiopia -08 and then compared them with all other known fossils of a similar pedigree. Berger and his team say they did a similar job in month.

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### READING COMPREHENSION (cont.)

Other critics allege that bones from the Rising Star cave were damaged by excavators working in haste. Many fragments have white patches that represent fresh breaks  $\underline{-09}$  at which the chamber's excavators were working.

But Berger – who is based at the Evolutionary Studies Institute at South Africa's University of Witwatersrand – flatly rejected this criticism. 'Before we started the dig, we could see the white patches on the bones and realized they had been caused by recent breakages,' he said. 'The point is that this is a chamber  $\underline{-10}$  – and they were the ones who were causing the damage. That is why we went in so quickly – to stop further damage.'

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

10. \_\_\_\_\_

Total points:...../10pts

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### LISTENING COMPREHENSION

You will hear a text about Libby, who studied theology and became the first female bishop in the Church of England. For questions 01-05, decide whether the statements are true (T) or false (F).

uro	ch of England. For questions 01-05, decide whether the statements are true (T) or false (F
1.	Libby's appointment as bishop was prior to three other women's appointments
2.	Libby feels grateful for the inspiration she has given to other women who were influenced by
	her being a woman
3.	Despite her great dancing talent, Libby preferred to become a priest.
4.	Libby is an organised reader, reading books one by one.
5.	For Christmas dinner, Libby prepares three stuffings.
	Total points:/5pts

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I al ticipant	, , , , , , , , , , , , , , , , , , , ,	************

### **VOCABULARY: PROGRESSIVE TEST**

List as many nouns related to flowers as possible. You will score 1 point for every 5 correctly spelled answers.

For example: daffodil

**Total Points: .....pts** 

Autori: doc. PhDr. Jana Bérešová, PhD. Recenzent: Mgr. Anna Brisudová Korektor: Joshua M. Ruggiero

Olympiáda v anglickom jazyku – okresné kolo

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