

ORIENTAÇÕES PARA A PROVA - INGLÊS

- O aluno deverá utilizar caneta preta ou azul;
- Apenas serão consideradas as respostas dadas na folha de resposta;
- Qualquer rasura no preenchimento da folha de resposta será considerada como questão anulada;
- A duração da prova é de 2 (duas) horas e 30 (trinta) minutos;
- Será permitido o uso individual de dicionário em meio impresso (unilíngue e/ou bilíngue), ficando proibido o uso de quaisquer dispositivos eletrônicos;
- A prova é composta por 10 questões alternativas, contemplando: Leitura e Compreensão textual; Gramática, Vocabulário e Expressões Idiomáticas;
- As questões são objetivas e possuem apenas uma alternativa correta. A divulgação do gabarito da prova será realizada dia 01 de julho de 2019 e dos resultados no dia 05 de julho de 2019 por meio do site da IMED;
- Os candidatos poderão solicitar revisão de prova através de e-mail direcionado ao setor de Relações Internacionais (marcia.perin@imed.edu.br), no dia 02 de julho de 2019, das 8:30 até as 22:30;
- Os certificados serão entregues na Central de Atendimentos da IMED, a partir do dia 30 de julho de 2019.

Tenha uma ótima prova!

Text A

Scientists print first 3D heart using patient's biological materials

1 In a major medical breakthrough, researchers have 'printed' the world's first 3D
2 vascularized engineered heart using a patient's own cells and biological materials.

3 In a major medical breakthrough, Tel Aviv University researchers have "printed"
4 the world's first 3D vascularized engineered heart using a patient's own cells and
5 biological materials. Their findings were published on April 15 in a study in Advanced
6 Science.

7 Until now, scientists in regenerative medicine - a field positioned at the
8 crossroads of biology and technology - have been successful in printing only simple
9 tissues without blood vessels.

10 "This is the first time anyone anywhere has successfully engineered and printed
11 an entire heart replete with cells, blood vessels, ventricles and chambers," says Prof.
12 Tal Dvir of TAU's School of Molecular Cell Biology and Biotechnology, Department of
13 Materials Science and Engineering, Center for Nanoscience and Nanotechnology and
14 Sagol Center for Regenerative Biotechnology, who led the research for the study.

15 Heart disease is the leading cause of death among both men and women in the
16 United States. Heart transplantation is currently the only treatment available to patients
17 with end-stage heart failure. Given the dire shortage of heart donors, the need to
18 develop new approaches to regenerate the diseased heart is urgent.

19 "This heart is made from human cells and patient-specific biological materials.
20 In our process these materials serve as the bioinks, substances made of sugars and
21 proteins that can be used for 3D printing of complex tissue models," Prof. Dvir says.
22 "People have managed to 3D-print the structure of a heart in the past, but not with cells
23 or with blood vessels. Our results demonstrate the potential of our approach for
24 engineering personalized tissue and organ replacement in the future."

25 Research for the study was conducted jointly by Prof. Dvir, Dr. Assaf Shapira of
26 TAU's Faculty of Life Sciences and Nadav Moor, a doctoral student in Prof. Dvir's lab.

27 "At this stage, our 3D heart is small, the size of a rabbit's heart," explains Prof.
28 Dvir. "But larger human hearts require the same technology."

29 For the research, a biopsy of fatty tissue was taken from patients. The cellular
30 and a-cellular materials of the tissue were then separated. While the cells were
31 reprogrammed to become pluripotent stem cells, the extracellular matrix (ECM), a
32 three-dimensional network of extracellular macromolecules such as collagen and
33 glycoproteins, were processed into a personalized hydrogel that served as the printing
34 "ink."

35 After being mixed with the hydrogel, the cells were efficiently differentiated to
36 cardiac or endothelial cells to create patient-specific, immune-compatible cardiac
37 patches with blood vessels and, subsequently, an entire heart.

38 According to Prof. Dvir, the use of "native" patient-specific materials is crucial to
39 successfully engineering tissues and organs.

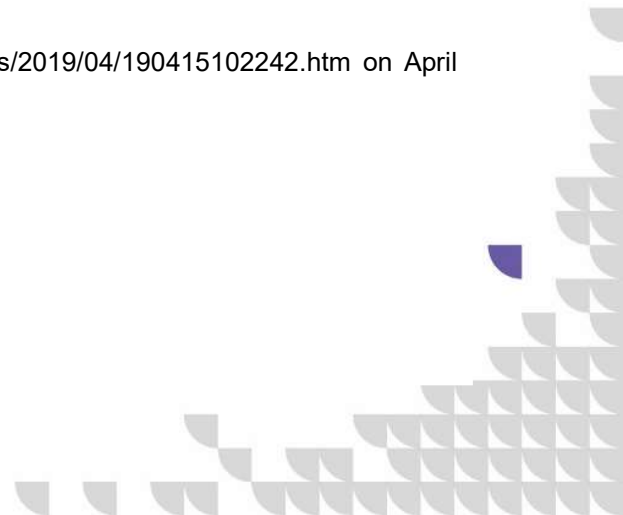
40 "The biocompatibility of engineered materials is crucial to eliminating the risk of
41 implant rejection, which jeopardizes the success of such treatments," Prof. Dvir says.
42 "Ideally, the biomaterial should possess the same biochemical, mechanical and
43 topographical properties of the patient's own tissues. Here, we can report a simple
44 approach to 3D-printed thick, vascularized and perfusable cardiac tissues that
45 completely match the immunological, cellular, biochemical and anatomical properties
46 of the patient."

47 The researchers are now planning on culturing the printed hearts in the lab and
48 "teaching them to behave" like hearts, Prof. Dvir says. They then plan to transplant the
49 3D-printed heart in animal models.

50 "We need to develop the printed heart further," he concludes. "The cells need
51 to form a pumping ability; they can currently contract, but we need them to work
52 together. Our hope is that we will succeed and prove our method's efficacy and
53 usefulness.

54 "Maybe, in ten years, there will be organ printers in the finest hospitals around
55 the world, and these procedures will be conducted routinely."

Retrieved and adapted from <https://www.sciencedaily.com/releases/2019/04/190415102242.htm> on April 24, 2019



Marque a alternativa correta.

1. Qual dentre as palavras a seguir poderia substituir **breakthrough** (linha 1) sem modificar o sentido da frase, no contexto onde se encontra?

- a) Setback
- b) Refinement
- c) Agreement
- d) Improvement
- e) Empowerment

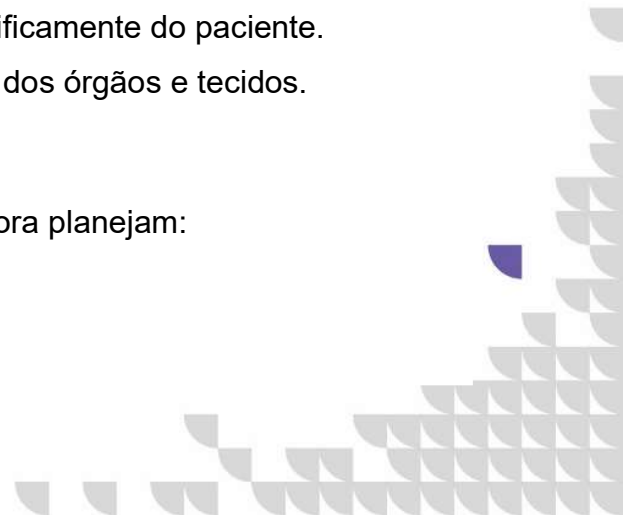
2. O pronome **who** (linha 14) refere-se a:

- a) The printed heart
- b) TAU's School of Molecular Cell Biology and Biotechnology Blood vessels
- c) Prof. Tal Dvir
- d) Sagol Center
- e) Nadav Moor

3. No trecho: "...the use of "native" patient-specific materials is crucial to successfully engineering tissues and organs" (linha 38 e 39) o termo "native" significa:

- a) Indígena, buscando a origem dos genomas dos pacientes.
- b) Natural, não alterados pela engenharia genética.
- c) Verdadeiro, sem qualquer manipulação por parte dos cientistas.
- d) Genuíno, devendo ser material extraído especificamente do paciente.
- e) Local, evitando o transporte e a contaminação dos órgãos e tecidos.

4. De acordo com o texto, os pesquisadores agora planejam:



- a) Transplantar o coração impresso em 3D em crianças e animais.
- b) Ensinar os animais, que tiveram o coração impresso em 3D, como se comportar.
- c) Imprimir corações de animais em 3D.
- d) Ensinar, no laboratório, como os estudantes podem imprimir corações em 3D.
- e) Cultivar os corações impressos no laboratório e "ensiná-los a se comportar" como corações.

5. A ideia principal do texto pode ser representada através da frase:

- a) Até agora, os cientistas da medicina regenerativa conseguiram somente imprimir tecidos simples sem a presença de vasos sanguíneos.
- b) Pesquisadores da Universidade de Tel Aviv imprimiram em 3D o primeiro coração vascularizado do mundo, usando células e materiais biológicos de um paciente.
- c) Doenças cardíacas são a principal causa de morte entre homens e mulheres nos Estados Unidos.
- d) Devido à escassez de doadores de coração, existe a necessidade de aprender como regenerar um coração doente.
- e) Nesse estágio da pesquisa o coração impresso em 3D é pequeno, e será futuramente transplantado em um coelho.



Text B

Brexit has trapped UK in no man's land, warns top economist

1 Brexit traps Britain's economy in "no man's land" and the next decade could be
2 the weakest for growth since the Second World War, a former senior Bank of
3 England policymaker has warned.

4 Andrew Sentance, a former member of the central bank's interest rate-setting
5 monetary policy committee (MPC), said: "The UK economy will be limping on for a
6 while, until Brexit negotiations are fully resolved. I can see the UK being in this limbo-
7 land for quite a while – certainly until the late 2020s."

8 The warning comes as the Guardian's Brexit dashboard reveals robust growth
9 at the start of the year, fuelled by a dramatic rise in stockpiling before the original Brexit
10 date of 29 March, now postponed until the end of October.

11 Sending sterling tumbling on the foreign exchanges over the past month,
12 observers now fear that Brexit has been transformed from its previous status as a time-
13 limited process into a structural feature of the UK economy, with the prospect of
14 complex and protracted negotiations dragging on growth for years to come.

15 To gauge the impact of Brexit on a monthly basis, the Guardian is
16 monitoring eight economic indicators, along with the value of the pound and the
17 performance of the FTSE 100.

18 Economists made forecasts for seven of those barometers before their release,
19 and in three cases, the outcome was worse than expected. In three cases, the result
20 was better than forecast, while one met the expectations of City economists.

21 The latest snapshot reveals a mixed picture for the economy amid the hiatus in
22 talks over leaving the EU, after the negotiations reached fever pitch earlier in April as
23 a full-scale national emergency.

24 Business activity has kicked into reverse amid a lack of new work for firms to
25 replace completed projects, as companies put decisions on hold owing to the lack of
26 clarity over Brexit. Manufacturers have, however, been bolstered by stockpiling to the
27 most intense levels on record for any G7 economy, perversely fuelling higher GDP
28 growth despite the malaise.

29 The UK posted record monthly goods trade deficits in both January and
30 February as business rushed to buy raw materials, components and merchandise from
31 overseas before the previous 29 March deadline in the Brexit talks.

32 Economists fear the stampede to protect against a disruptive no-deal scenario
33 could lead to sluggish economic growth in future as firms run-down their supplies. The
34 EY Item Club forecasting group downgraded its growth projections for the UK to 1.3%
35 for 2019 and 1.5% for 2020 for this reason, warning that the strong start to 2019 was
36 likely to be a “false dawn” for Britain. The economy grew by 1.4% in 2018.

37 Against this backdrop, and after Theresa May delayed the Brexit process earlier
38 in the month, the Bank of England is widely expected to keep interest rates on hold
39 when it releases the decision of the MPC and its quarterly inflation report on Thursday.

40 The Guardian’s Brexit dashboard also reveals some bright spots for the
41 economy from the latest economic news over the past month.

42 Consumers appear to have ignored the political turmoil and kept on spending
43 on the high street, despite fears that sales would fall as Brexit neared. Households
44 were also handed a reprieve from inflation unexpectedly holding steady at 1.9% in
45 March, while wage growth has risen to the strongest levels in a decade, enabling them
46 to start rebuilding their finances.

47 Unemployment remained at the lowest level since the mid-1970s, in a sign that
48 Brexit has not deterred employers from hiring staff. However, economists believe that
49 firms have put off spending on technology and hired workers to meet demand instead.

50 The latest figures for productivity – a measure of economic output per hour of
51 work, which is key for driving up living standards over the long term – showed that
52 Britain’s efficiency gains slowed in 2018.

53 Last year, business investment, which is key for driving future productivity gains,
54 fell for four quarters in a row for the first time since the financial crisis. Economists fear
55 that protracted delays in the Brexit process could further dampen investment, with a
56 knock-on effect for growth in future.

57 Writing in the Guardian, David Blanchflower, another former member of the
58 Bank’s MPC, said: “The short-term picture has not been bad but Brexit is still having a
59 chilling effect on the economy.”

Retrieved and adapted from <https://www.theguardian.com/business/2019/apr/29/brexit-has-trapped-uk-in-no-mans-land-warns-top-economist> on April 30, 2019.

Marque a alternativa correta.

6. Nos primeiros parágrafos, a insegurança econômica percebida pelo autor, com relação ao Brexit, pode ser observada na seguinte expressão:

- a) rate-setting
- b) fully resolved
- c) fuelled by
- d) limping on
- e) prospect of

7. De acordo com o texto, o nível de desemprego e produtividade são identificados respectivamente:

- a) Permanece o maior índice desde a metade da década de 1970; enquanto os ganhos de eficiência aumentaram em 2018.
- b) Permanece o menor índice desde a metade a década de 1970; enquanto os ganhos de eficiência diminuiram em 2018.
- c) Apresenta o menor índice desde final da década de 1970; logo os ganhos de eficiência mantiveram-se constantes desde 2008.
- d) Apresenta o menor índice desde a década de 1970, uma vez que as empresas continuam a contratar; logo os ganhos de eficiência aumentaram consideravelmente em 2018.
- e) Permanece o maior índice desde a década de 1970, uma vez que as empresas continuam a contratar; por outro lado os ganhos de eficiência mantiveram-se constantes desde 2008.

8. De acordo com o texto, entende-se que no ano passado os investimentos:

- a) Diminuíram no último trimestre, devido a isto os economistas esperam que os atrasos no processo do Brexit possam diminuir os investimentos ainda mais, impactando indiretamente no crescimento futuro.
- b) Aumentaram nos últimos quatro meses, deste modo os economistas esperam que o processo do Brexit possa aumentar os investimentos ainda mais, impactando direta e positivamente no crescimento futuro.
- c) Aumentaram nos últimos quatro trimestres, devido a isto os economistas esperam que o processo do Brexit possa aumentar os investimentos ainda mais, impactando direta e positivamente no crescimento futuro.
- d) Diminuíram por quatro trimestres consecutivos, sendo assim os economistas esperam que o processo do Brexit possa aumentar os investimentos, impactando direta e positivamente no crescimento futuro.
- e) Diminuíram por quatro trimestres consecutivos, devido a isto os economistas temem que atrasos no processo do Brexit possam diminuir os investimentos ainda mais, impactando indiretamente no crescimento futuro.

9. A ideia principal do texto B pode ser expressa através da seguinte frase extraída do texto:

- a) *The UK economy will be limping on for a while, until Brexit negotiations are fully resolved.*
- b) *To gauge the impact of Brexit on a monthly basis, the Guardian is monitoring eight economic indicators, along with the value of the pound and the performance of the FTSE 100.*
- c) *Economists made forecasts for seven of those barometers before their release, and in three cases the outcome was worse than expected.*
- d) *The UK posted record monthly goods trade deficits in both January and February as business rushed to buy raw materials, components and merchandise from overseas before the previous 29 March deadline in the Brexit talks.*
- e) *The Guardian's Brexit dashboard also reveals some bright spots for the economy from the latest economic news over the past month.*

10. Qual a melhor tradução para o seguinte parágrafo (linhas 42 a 46):

Consumers appear to have ignored the political turmoil and kept on spending on the high street, despite fears that sales would fall as Brexit neared. Households were also handed a reprieve from inflation unexpectedly holding steady at 1.9% in March, while wage growth has risen to the strongest levels in a decade, enabling them to start rebuilding their finances.

a) Os empresários parecem ter ignorado a turbulência política e continuaram investindo no comércio, apesar dos temores de que as vendas caíam com a aproximação do Brexit. As famílias também receberam um alívio da inflação inesperadamente estável em 1,9% em março, enquanto o crescimento dos salários subiu para os níveis mais fortes em uma década, permitindo que eles começassem a reconstruir suas finanças.

b) Os consumidores parecem ter aceitado a estabilidade política e continuaram gastando no comércio, apesar dos temores de que as vendas caíam com a aproximação do Brexit. As famílias também receberam um alívio da inflação inesperadamente estável em 1,9% em março, enquanto o crescimento dos salários subiu para os níveis mais fortes em uma década, permitindo que eles começassem a reconstruir suas finanças.

c) Os consumidores parecem ter ignorado a turbulência política e continuaram gastando no comércio, apesar dos temores de que as vendas caíam com a aproximação do Brexit. As famílias também receberam um alívio da inflação inesperadamente estável de 1,9% em março, enquanto o crescimento dos salários subiu para os níveis mais fortes em uma década, permitindo que eles começassem a reconstruir suas finanças.

d) Os consumidores parecem ter ignorado a turbulência política e continuaram gastando no comércio, apesar dos temores de que as vendas caíam com a aproximação do Brexit. As famílias também receberam um alívio da inflação inesperadamente estável em 19 % em março, enquanto o crescimento dos salários subiu para os níveis mais fortes em uma década, permitindo que eles começassem a resumir suas finanças.

e) Os consumidores parecem ter entendido a estabilidade política e não continuaram gastando no comércio, apesar dos rumores de que as vendas cairiam com a aproximação do Brexit. As famílias também receberam um alívio da inflação inesperadamente estável em 1,9% em março, enquanto o crescimento dos salários subiu para os níveis mais fortes em uma década, permitindo que eles começassem a remodelar suas finanças.

