MESTRADO E DOUTORADO
EM BIOCIÊNCIAS E BIOTECNOLOGIA EM SAÚDE 2015

Prova de Inglês

Sexta-feira, dia 17 de outubro de 2014
09h00 – 12h00
PART 1

Please answer questions 1 to 10 with reference to Text 1. There is one and only one correct answer to each question.

Q1. MDGs are
A. long-term ambitions for the Third World unlikely to be achieved within the 21st century
B. US development goals to be achieved by the end of the 20th century
C. the UN Secretary-General's job satisfaction appraisal criteria
D. development targets set by the United Nations to be met by the end of 2015

Q2. The term “last big push” in the first sentence of Paragraph 1 could best be replaced by which of the following without substantially altering the meaning?
A. perpetual strong motivation
B. last-minute gamble
C. previous major initiative
D. final great effort

Q3. According to recent reports, what will be the most important concern of the post-2015 development agenda?
A. Using science to combat climate change
B. Goals complementary to the original millennium goals
C. Ensuring worldwide income equality
D. Ending global poverty

Q4. According to Paragraph 2,
A. national governments are in crisis everywhere in the world
B. grant applications need not make reference to multidisciplinary research
C. health and poverty are not related to nutrition and employment opportunities
D. more information in a variety of fields is needed, if development goals are to be met

Q5. The word 'point' in the first sentence of Paragraph 3 could be replaced by which of the following without substantially altering the meaning?
A. purpose
B. argument
C. show
D. dot

Q6. According to Paragraph 3,
A. poor people are more likely to be affected by natural disasters
B. engineers and architects are not helping to build resilient cities
C. complex weather events are impossible to model
D. hurricanes and earthquakes help to depopulate the globe and hence reduce poverty
Q7. The word 'remedies' in the first sentence of Paragraph 4 could best be replaced by which of the following without substantially altering the meaning?

A. backwardness
B. medicines
C. reminders
D. solutions

Q8. The phrase 'weigh the risks to life and limb' also in the first sentence of Paragraph 4 could best be replaced by which of the following without substantially altering the meaning?

A. dwell on lifestyle and body-image issues
B. measure the quality of life of people with disabilities
C. increase the danger of life-threatening conditions affecting bodily extremities
D. assess the likelihood of death or injury

Q9. The word 'ones' in the third sentence of Paragraph 5 refers back to which preceding word or phrase?

A. scientists, private investors, public funding agencies, and policy-makers
B. impetus
C. agenda
D. ideas

Q10. The article concludes by

A. urging the United Nations to speed up work on drafting its post-2015 development agenda
B. cautioning scientists to put off work related to 2015 development goals until the UN gives the go ahead
C. calling on scientists to start work on the post-2015 development agenda even though it has not yet been officially unveiled
D. dampening enthusiasm for the idea that science can provide solutions to developmental problems
The question of what can be achieved in 1000 days has preoccupied kings, queens, presidents, and, very recently, the Secretary-General of the United Nations (UN). Ban Ki-moon has not only appealed for a last big push to reach as many as possible of the UN's Millennium Development Goals (MDGs) by the deadline of 31 December 2015, he is advocating the establishment of objectives that should succeed the MDGs as well. Strong clues about the shape of the post-2015 agenda can be found in two recent reports, one published last month by a High-Level Panel convened by Ban Ki-moon and chaired by the presidents of Indonesia and Liberia and the prime minister of the United Kingdom, and the other released this month by the Sustainable Development Solutions Network. Both reports list the eradication of poverty as the number-one priority and set out complementary goals concerned with gender equality, education, health, food, water and sanitation, climate change, energy, employment, natural resources, governance, peace, and finance. These reports are unlikely to be the last contributions to the debate, but the proposed goals represent a call to action for the science community.

2. The plain truth is that it is not clear how these goals will be met, but it is evident that to fill the development gap, we must fill the knowledge gap from many different sources. More than ever, multidisciplinary research must be treated not as a formulaic insert on grant applications but as an immediate development necessity. Healthy lives do depend on food security. Poverty reduction does depend on jobs and equitable growth. Good governance is critical everywhere.

3. Two cross-disciplinary experiences amplify the point. Building resilience to natural hazards, such as hurricanes and earthquakes, and reducing deaths from them are subcomponents of eradicating poverty, because the poor suffer disproportionately from such events. Much progress has been made in building resiliency through collaborations between geoscientists, engineers, and architects; there are now early warning mechanisms, reinforced shelters, and improved modeling of complex events to target populations at risk.

4. But the effectiveness of these remedies also depends on how vulnerable people weigh the risks to life and limb against the cost of abandoning property. So the best plans for risk mitigation should be informed by social sciences as well. Protecting people against risk is also central to achieving universal health coverage, a unifying goal in global health today. The twin questions of who is most at risk of impoverishment due to illness and what are the best ways to provide them with financial protection, call for a blend of epidemiology and welfare economics, set against the backdrop of societal preference. Universal health coverage requires services, not only for the treatment of illness but also for prevention, which may need a combination of educational, environmental, public health, and policy measures.

5. The two reports present a vast landscape of research possibilities. Research priorities must emerge from a global debate involving scientists, private investors, public funding agencies, and policy-makers, without forgetting the people who might benefit from the research. A guiding research agenda could stimulate fresh ideas and perhaps give renewed impetus to old ones. It would help strengthen research capacity around the world, fostering new institutions and networks, training high-caliber researchers, and generating data, ideally as an open and shared resource. It would also bring a responsibility, or at least an opportunity, to translate research results into action.

6. Although the post-2015 development agenda is still a draft, it is shaping up to be a huge and exciting challenge for science. For those ready to take it on, there is no need to wait until January 2016.
PART 2

Please answer questions 11 to 20 with reference to Text 2. There is one and only one correct answer to each question.

Q11. The term 'a bird's eye view' in Paragraph 1 means
A. an environmental perspective
B. an overview
C. a detailed analysis
D. a wild guess

Q12. According to Paragraph 1,
A. dengue fever is not considered an important target for funding
B. the USA and the Republic of Ireland spend much more combating diseases that primarily affect the poor than Germany and Japan
C. pneumonia can be caused by aspiration of bread crumbs
D. HIV/AIDS costs some countries 80% of their national budget

Q13. The term “neglected diseases” in Paragraph 2 appears in inverted commas because
A. it refers back to a phrase already used in the title
B. it is a highly technical term
C. it is a foreign term
D. the author questions whether the diseases conventionally described as such are in fact neglected these days

Q14. Which of the following is true, according to Paragraph 2?
A. Mary Moran headed up the team of academics that produced the study reviewed in this article
B. The head office of the Institute of National Health is in Georgia
C. Most countries award research grants on a completely arbitrary basis
D. There have been many previous studies of global spending on neglected diseases

Q15. Which of the following criteria is mentioned in Paragraph 3 as one of those used in the study for inclusion of diseases in the 'neglected' category?
A. The commercial viability of developing drugs to treat the disease
B. Ease of access to existing vaccines and treatments
C. Higher prevalence in lower-income countries
D. The level of pain experienced by individuals affected by the disease

Q16. According to Paragraph 4,
A. Bill and Melinda Gates spend 18% of their household income on healthcare
B. research on neglected diseases is mostly funded by the public sector
C. forty-two percent of US National Institutes of Health have been classified as 'good'
D. Ireland spends a much greater share of its GDP on healthcare than the US

Q17. According to Paragraph 5,
A. the Disability Adjusted Life Years index is no longer a matter of dispute among academics
B. research and development has concentrated on HIV/AIDS, malaria, and tuberculosis, even though other diseases are responsible for more mortality and morbidity
C. Moran et al. neglected to mention DALYs in their report
D. the World Health Organization requires R&D funding agencies to select a single disease
Q18. According to Paragraph 6, David Molyneux
A. thinks that expensive new research is an unavoidable funding priority
B. is critical of the Liverpool School of Tropical Medicine
C. believes UK policy-makers have shiftily misdirected funds towards treatment of respiratory and lower-gut infections
D. is impressed by Moran et al.'s report

Q19. According to Paragraph 7, Moran et al.'s study received funding from
A. the Bill and Melinda Gates Foundation
B. the Indian government
C. the Chinese government
D. big pharma

Q20. The word 'worries' in Paragraph 7 could be replaced by which of the following terms without significantly altering the meaning of the sentence?
A. expects
B. hopes
C. is concerned
D. urges
Some Neglected Diseases Are More Neglected Than Others

– MARTIN ENSERINK

1. In a bird's-eye view of who's fighting diseases among the poor, Ireland and the United States stand out for largess; Germany and Japan seem skimpy. As for targets, the battle against dengue is relatively well-funded, whereas pneumonia, meningitis, and diarrhea get mere table crumbs. The “big three”— HIV/AIDS, malaria, and tuberculosis—together soak up some 80% of the money.

2. Those are some conclusions from the first global study tracking spending on research and development for “neglected diseases.” The authors, led by Mary Moran of the George Institute for International Health in Sydney, Australia, hope that the study will help grant-makers decide where best to put their money and spur countries into action.

3. With the help of an expert panel, the team first decided which diseases currently suffered scientific neglect; to qualify, they had to occur disproportionately in low- or middle-income countries, and there had to be a need for new vaccines, drugs, or diagnostics that the market fails to address. The team then painstakingly tried to trace every grant or investment made in 2007 by governments, institutes, charities, and companies to address those needs. The paper, published in PloS Medicine this week, documents a total of $2.5 billion spent on 30 diseases.

4. Government agencies pick up the biggest part of the tab, with the U.S. National Institutes of Health good for 42% of the research. (The Bill and Melinda Gates Foundation comes in second at 18%.) Per capita, however, Ireland is the biggest public spender.

5. A comparison of the estimated global burden of each disease as expressed in disability-adjusted life years (DALYs), a measure that aims to capture both disease and death, shows that R&D funders have flocked to the big three, while other diseases with an even bigger burden get little R&D attention. The accuracy of the DALY estimates, which the World Health Organization last updated in 2004, is under constant debate. Moran explains that funders may have other reasons to pick a disease, such as the expectation that investments will pay off quickly; that's why the team mentioned DALYs only briefly in its report.

6. Still, it's clear that some diseases are underfunded, she says. Indeed, the data show that the big three no longer deserve the term “neglected,” says David Molyneux of the Liverpool School of Tropical Medicine in the United Kingdom, who calls the paper “impressive.” Molyneux says policymakers must “shift resources” to respiratory infections, diarrhea, and other underfunded diseases. Some can be controlled without new research, by scaling up current, and often cheap, methods.

7. The team, which has funding from the Bill and Melinda Gates Foundation to do the survey annually through 2013, is already working on next year's edition. Next time, Moran hopes to include the contributions of four significant funders—India, China, and pharma-giants Merck and Wyeth—that failed to submit data this year. But she worries that the economic downturn may lead some funders to spend less where more is needed.
Screenshot of a test with questions and answers. The questions range from 1 to 20, and each question has four possible answers: A, B, C, and D. The answers are marked in green for correct responses.