

INSTITUTO TECNOLÓGICO DE AERONÁUTICA

VESTIBULAR 2016



PROVA DE INGLÊS

INSTRUÇÕES

1. Esta prova de Inglês e a de Português têm, conjuntamente, duração de **quatro horas**.
2. Não é permitido deixar o local de exame antes de decorridas **duas horas** do início das provas.
3. Você poderá usar **apenas** lápis (ou lapiseira), caneta preta de material transparente e borracha. **É proibido portar qualquer outro material escolar.**
4. A prova de Inglês é composta de **20 questões de múltipla escolha** (numeradas de 1 a 20).
5. Verifique se este caderno de questões está completo.
6. Cada questão admite **uma única** resposta.
7. Antes do final da prova, você receberá uma **folha de leitura óptica, destinada à transcrição das respostas de Inglês (1 a 20) e de Português (21 a 40)**. Usando **caneta preta de material transparente**, assinale a opção correspondente à resposta de cada uma das questões de múltipla escolha. Você deve preencher todo o campo disponível para a resposta, sem extrapolar-lhe os limites, conforme instruções na folha de leitura óptica.
8. Cuidado para não errar no preenchimento da folha de leitura óptica. Se isso ocorrer, avise o fiscal, que lhe fornecerá uma folha extra, com o cabeçalho devidamente preenchido.
9. **Não haverá tempo suplementar para o preenchimento da folha de leitura óptica.**
10. No verso da folha destinada à redação, na Prova de Português, existe uma reprodução da folha de leitura óptica, que deverá ser preenchida com um simples traço a lápis durante a realização da prova.
11. A **não devolução** da folha de leitura óptica e do caderno de questões implicará a **desclassificação do candidato**.
12. No dia 22/12/2015, a partir das 10:00 horas, o gabarito desta prova estará disponibilizado no *site* do ITA (www.ita.br).
13. **Aguarde o aviso para iniciar a prova. Ao terminá-la, avise o fiscal e aguarde-o no seu lugar.**

As questões de 1 a 7 referem-se ao texto a seguir:

Brazil's business Belindia – Why the country produces fewer world-class companies than it should

BRAZILIANS make up almost 3% of the planet's population and produce about 3% of its output. Yet of the firms in *Fortune* magazine's 2014 "Global 500" ranking of the biggest companies by revenue only seven, or 1.4%, were from Brazil, down from eight in 2013. And on *Forbes*'s list of the 2,000 most highly valued firms worldwide just 25, or 1.3%, were Brazilian. The country's biggest corporate "star", Petrobras, is mired in scandals, its debt downgraded to junk status. In 1974 Edmar Bacha, an economist, described its economy as "Belindia", a Belgium-sized island of prosperity in a sea of India-like poverty. Since then Brazil has done far better than India in alleviating poverty, but in business terms it still has a Belindia problem: a handful of world-class enterprises in a sea of poorly run ones.

Brazilian businesses face a litany of obstacles: bureaucracy, complex tax rules, shoddy infrastructure and a shortage of skilled workers—to say nothing of a stagnant economy. But a big reason for Brazilian firms' underperformance is less well rehearsed: poor management. Since 2004 John van Reenen of the London School of Economics and his colleagues have surveyed 11,300 mid-sized firms in 34 countries, grading them on a five-point scale based on how well they monitor their operations, set targets and reward performance. Brazilian firms' average score, at 2.7, is similar to that of China's and a bit above that of India's. But Brazil ranks below Chile (2.8) and Mexico (2.9); America leads the pack with 3.3. The best Brazilian firms score as well as the best American ones, but its long tail of badly run ones is fatter.

Part of the explanation is that medium and large firms tend to be better-organised than small ones, and not only because well-run ones are likelier to grow. Brazil offers incentives aplenty to stay bitty, such as preferential tax treatment for firms with a turnover of no more than 3.6m reais (\$1.3m). As they expand, many firms split rather than face increased scrutiny from the taxman. According to the World Bank, a mid-sized Brazilian firm spends 2,600 hours filing taxes each year. In Mexico, it is 330 hours.

Ownership patterns play a part too. Many Brazilian concerns are controlled by an individual shareholder, or one or two families. Two-thirds of those with sales of more than \$1 billion a year are family-owned, notes Heinz-Peter Elstrodt of McKinsey, a consulting firm. That is less than in Mexico (96%) or South Korea (84%) but more than in America or Europe. Mr Van Reenen's research shows that where family owners plump for outside chief executives, their firms do no worse than similarly sized ones with more diverse shareholders. But all too often they pick kin over professional managers—and performance suffers. This is particularly true in "low-trust" societies like Brazil, where bosses hire relatives instead of better-qualified strangers to avoid being robbed or sued for falling foul of overly worker-friendly labour laws.

Decades of economic turmoil—which ended when hyperinflation was vanquished in 1994—meant that companies were managed from crisis to crisis. This forced Brazilian firms to be nimble. But it also encouraged short-termism, which management consultants and academics finger as Brazilian managers' number-one sin. Faced with a record drought in 2014, and a subsequent spike in energy prices in a hydropower-dependent country, Usiminas, a steelmaker, stopped smelting and started selling power it had bought on cheap long-term contracts. Energy sales made up most of its operating profits that year. Such short-term stunts are hardly the path to long-term greatness.

Worse, crisis management all too often consists of going cap in hand to the government. Brazilian bosses continue to waste hours in meetings with politicians that could be better spent improving their businesses. In January 2014, as vehicle sales flagged, the automotive industry's reflex reaction was to descend on the capital, Brasília, and demand an extension of its costly tax breaks. Thanks to lifelines cast by the state, feeble firms stay afloat rather than sink and make room for more agile competitors. Shielded from competition by tariffs, subsidies and local-content rules, they have little reason to innovate. A locally invented gizmo which lets cars run on both petrol and biodiesel is nifty. But, asks Marcos Lisboa of Insper, a business school, does that really justify six decades of public support for the motor industry?

The dead hand of government

Indeed, a glance at the "Belgian" end of Brazil's corporate landscape suggests that successful firms cluster in sectors the state has not tried desperately to help, such as retail or finance. Bradesco, a big lender, is internationally praised as a pioneer of automated banking. Eash-month Arezzo creates 1,000 new models of women's shoes, and picks 170-odd to sell in its shops.

Brazil's other world-beaters are in industries like agriculture and aerospace, which are free to compete at home and abroad, and in which the government sticks to its proper role. In 1990 farms were allowed to consolidate and to buy foreign machines, pesticides and fertiliser. Efforts by Brazil's trade negotiators opened up export markets. JBS, a meat giant, can slaughter 100,000 head of cattle a day, selling more beef than any rival worldwide. Thanks in part to Embrapa, the national agriculture-research agency, Brazilian farms have been raising productivity by about 4% a year for two decades. Similarly, a supply of skilled engineers and know-how from the government's Technological Institute of Aeronautics has helped turn Embraer, privatised in 1994, into one of the world's most successful aircraft-makers.

The success of businesses such as these offers a lesson for the state. The best way to make Brazil's underperforming firms more competitive would be to make them compete more. Coddling by the state can be more a curse than a blessing. Ronald Reagan's dictum that the nine most terrifying words in the English language are, "I'm from the government and I'm here to help," translates well into Flemish, Hindi and Brazilian Portuguese.

By Schumpeter. In: *The Economist*. Feb 28th, 2015.

Questão 1. Marque a opção cujo assunto **não** é mencionado no texto.

A () Empresas familiares

B () Mão-de-obra qualificada

C () Incentivos fiscais

D () Encargos financeiros

E () Bolsa de valores

Questão 2. De acordo com o texto,

- A () devido à crise financeira, as indústrias têxtil e agrícola deixaram de fazer parte das empresas brasileiras mais bem sucedidas no cenário mundial.
- B () “Belindia” é o termo usado pelo economista Edmar Bacha para comparar a produtividade empresarial do Brasil com a da Bélgica e a da Índia.
- C () a pesquisa de Van Reenen diz que empresas familiares brasileiras são prejudicadas por escolher parentes ao invés de profissionais mais qualificados como gestores.
- D () reuniões entre empresários brasileiros e políticos contribuem para a inovação automotiva e a redução dos impostos.
- E () as revistas *Fortune* e *Forbes* revelam ascensão das empresas brasileiras no *ranking* mundial de 2013 para 2014.

Questão 3. Marque a opção em que a(s) vírgula(s) sublinhada(s) **não** demarca(m) um termo ou expressão explicativa.

- A () In 1974 Edmar Bacha₂ an economist₂ described its economy as “Belindia”... (linha 7)
- B () Brazilian businesses face a litany of obstacles: bureaucracy₂ complex tax rules₂ shoddy infrastructure... (linha 10)
- C () Two-thirds of those with sales of more than \$1 billion a year are family-owned, notes Heinz-Peter Elstrodt of McKinsey₂ a consulting firm... (linhas 24/25)
- D () ... and a subsequent spike in energy prices in a hydropower-dependent country, Usiminas₂ a steelmaker₂ stopped... (linha 33)
- E () ... the automotive industry’s reflex reactions was to descend on the capital₂ Brasília₂ and demand an extension... (linhas 38/39)

Questão 4. Os termos sublinhados nas orações abaixo podem ser substituídos, respectivamente, sem que haja prejuízo do sentido, por:

- I. Ownership patterns play a part too (linha 23) → as well.
- II. Decades of economic turmoil... (linha 30) → growth.
- III. Brazilian bosses continue to waste hours in meetings with politicians...(linhas 36/37) → findings.
- IV. In January 2014, as vehicle sales flagged... (linha 37/38) → dropped.

Estão corretas

- A () apenas I e II.
- B () apenas I e III.
- C () apenas I e IV.
- D () apenas II e IV.
- E () apenas III e IV.

Questão 5. Marque, dentre as frases extraídas do texto, aquela que expressa o posicionamento do autor com relação ao papel do governo na gestão de empresas brasileiras.

- A () Brazilian businesses face a litany of obstacles. (linha 10)
- B () The best Brazilian firms score as well as the best American ones. (linha 16)
- C () Many Brazilian concerns are controlled by an individual shareholder or one or two families. (linhas 23/24)
- D () Such short-term stunts are hardly the path to long-term greatness. (linha 35)
- E () Coddling by the state can be more a curse than a blessing. (linhas 58/59)

Questão 6. O texto apresenta como modelos de gestão bem sucedida e independente de auxílio do governo as empresas

- A () Bradesco e Arezzo.
- B () Embraer e Petrobras.
- C () Arezzo e Embrapa.
- D () Petrobrás e JBS.
- E () JBS e Usiminas.

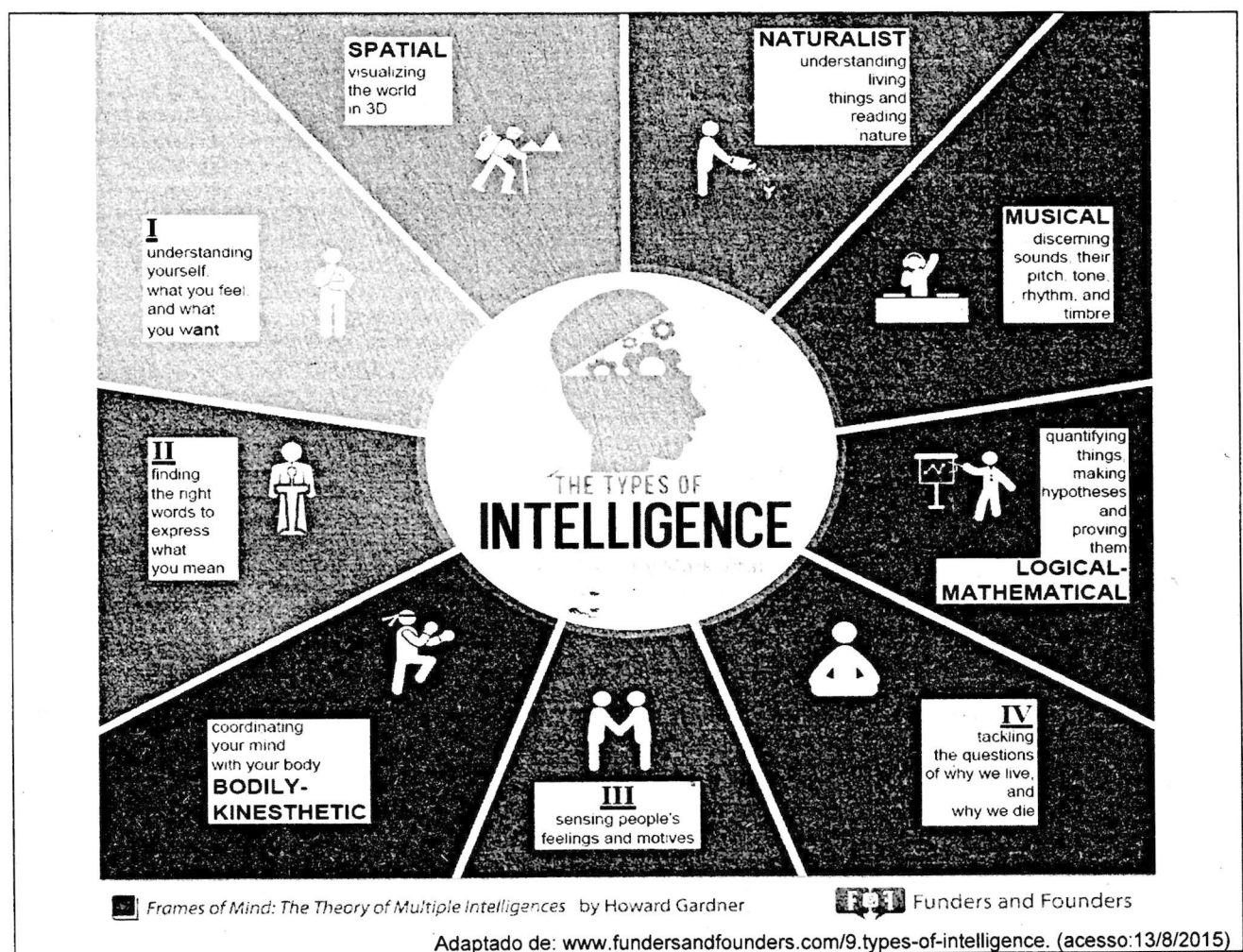
Questão 7. Considere as seguintes afirmativas:

- I. Em “This forced Brazilian firms to be nimble. But it also encouraged short-termism, which management consultants...” (linhas 31/32), os pronomes sublinhados possuem o mesmo referente.
- II. Em “The best Brazilian firms score as well as the best American ones...” (linha 16) e em “Brazil offers incentives aplenty to stay bitty, such as preferential tax treatment...” (linha 19) os termos sublinhados têm o mesmo sentido.
- III. Em “This is particularly true in “low-trust” societies like Brazil...” (linha 28) e em “Bradesco, a big lender, is internationally praised as a pioneer...” (linhas 47/48) os termos sublinhados têm o mesmo sentido.
- IV. Em “...which ended when hyperinflation was vanquished in 1994” (linha 30) e em “...the automotive industry’s reflex reaction was to descend on the capital...” (linha 38), as formas verbais sublinhadas estão na voz passiva.

Está(ão) correta(s)

- A () apenas I e III. B () apenas II e III. C () apenas III.
D () apenas III e IV. E () apenas a IV.

As questões de 8 a 10 referem-se à figura a seguir:



Questão 8. Os tipos de inteligência que se associam às definições I, II, III e IV da figura são, respectivamente:

- | | I | II | III | IV |
|-------|----------------|----------------|----------------|----------------|
| A () | inter-personal | existential | intra-personal | linguistic |
| B () | inter-personal | linguistic | intra-personal | existential |
| C () | intra-personal | linguistic | inter-personal | existential |
| D () | intra-personal | inter-personal | existential | linguistic |
| E () | existential | linguistic | inter-personal | intra-personal |

Questão 9. De acordo com a descrição dos tipos de inteligência apresentados na figura,

- A () pessoas capazes de visualizar objetos mentalmente de vários ângulos são dotadas de inteligência espacial.
- B () pessoas dotadas de inteligência lógico-matemática são capazes de comprovar teoremas complexos.
- C () pessoas preocupadas com o equilíbrio entre mente e corpo e com a boa postura corporal são dotadas de inteligência corporal-cinestésica.
- D () pessoas dotadas de inteligência musical conseguem identificar ritmos e notas musicais e tocam qualquer instrumento.
- E () pessoas dotadas de inteligência naturalista são leitores vorazes de textos sobre a natureza.

Questão 10. Considere as seguintes construções léxico-gramaticais da figura:

- I. O uso do *-ing* mostra que os tipos de inteligência são momentâneos.
- II. O uso dos pronomes *you, we, your, yourself* possibilita identificação dos leitores com a figura.
- III. Os pronomes *what* e *why* têm função interrogativa.

Está(ão) correta(s)

- A () apenas a I.
- B () apenas a II.
- C () apenas a III.
- D () apenas a I e a II.
- E () todas.

As questões de 11 a 14 referem-se ao texto a seguir:

1 **Teflon was Invented by Accident**
2
3 Today I found out Teflon was invented by accident.
4 The man who accidentally invented it was Dr. Roy Plunkett. After receiving his BA, MS, and eventually PhD in
5 organic chemistry, Dr. Plunkett took a job with DuPont, in Jackson New Jersey. He was subsequently assigned to work
6 on synthesizing various new forms of refrigerant, trying to find a non-toxic alternative to refrigerants like sulfur dioxide and
7 ammonia.
8 According to DuPont, in 1938, 27 year old Dr. Plunkett and his assistant, Jack Rebok, were experimenting with
9 one such potential alternative refrigerant, tetrafluoroethylene (TFE). Dr. Plunkett subsequently created around 100 pounds
10 of TFE and stored the gas in small cylinders.
11 On April 6, 1938, upon opening the valve on one of the pressurized cylinders of TFE that had previously been
12 frozen, nothing came out, even though by its weight, it seemed to still be full. Dr. Plunkett and Jack Rebok then decided
13 to investigate further by cutting the cylinder open. Once they managed to get it open, they discovered that the TFE gas
14 inside had polymerized into a waxy white powder, polytetrafluoroethylene (PTFE) resin.
15 Ever the scientist, Plunkett then proceeded to run tests on this new substance to see if it had any unique or useful
16 properties. Four of the most important properties of this substance discovered were that it was extremely slippery (one of
17 the slipperiest substances known to man), non-corrosive, chemically stable, and that it had an extremely high melting
18 point. These properties were deemed interesting enough that the study of the substance was transferred to DuPont's
19 Central Research Department and assigned to chemists that had special experience in polymer research and
20 development, while Dr. Plunkett was then promoted and transferred to a separate division that produced tetraethyl (sic),
21 used to boost gasoline octane levels.
22 Three years later, the process and name of Teflon were patented and trademarked. Four years after that, Teflon
23 first began being sold, initially only used for various industrial and military applications due to the expense of producing
24 TFE. By the 1960s, various forms of Teflon were being used in a variety of applications, such as stain repellant in fabrics
25 and electrical wire insulation. It was also in the 1960s that Teflon began being used in its most publicly known application,
26 as a coating for non-stick pans. Today, Teflon or other brands of the same product are also used in windshield wipers;
27 carpets and furniture (as a stain repellant); light bulbs; coating on glasses; in various hair products; in semiconductor
28 manufacturing; automotive lubricant; igniters for solid-fuel rocket propellants; and in infrared decoy flares, among other
29 things.

Adaptado de www.todayIfoundout.com (acesso em 19/07/2015).

Questão 11. De acordo com o texto, pode-se afirmar que Dr. Roy Plunkett

- A () é doutor em química orgânica e foi responsável pela descoberta de substâncias tóxicas em sistemas de refrigeração.
- B () começou a atuar na empresa DuPont juntamente com Jack Rebok em Nova Jersey em 1938.
- C () foi responsável pela descoberta de uma resina não corrosiva chamada PTFE.
- D () provocou um acidente na empresa DuPont ao armazenar o gás TFE em cilindros pequenos.
- E () foi transferido para o Departamento Central de Pesquisa da empresa a fim de se dedicar exclusivamente ao estudo do PTFE.

Questão 12. Dentre as propriedades da resina PTFE citadas no texto, **não** se inclui a

- A () refrigerante B () deslizante C () quimicamente inerte
D () resistente à alta temperatura E () não corrosiva

Questão 13. De acordo com o texto,

- A () desde 1938, a empresa DuPont realiza estudos para expandir o uso comercial da resina PTFE.
B () a comercialização do Teflon teve início em 1960, após duas décadas de testes em diversos segmentos industriais.
C () a descoberta da nova resina levou a DuPont a instituir novo departamento na empresa para focar neste estudo.
D () a descoberta do Teflon ocorreu por acaso, quando Plunkett e Rebok buscavam desenvolver compostos químicos para sistemas de refrigeração.
E () a preocupação inicial da empresa DuPont era desenvolver equipamentos de baixo custo e menos agressivos ao meio ambiente.

Questão 14. De acordo com o texto, o tipo de indústria que **não** se beneficia com as propriedades do Teflon é a indústria

- A () têxtil. B () automobilística. C () espacial.
D () farmacêutica. E () cosmética.

As questões de 15 a 20 referem-se ao texto a seguir:

1 **Your Facial Bone Structure Has a Big Influence on How People See You**
2
3 (...) Selfies, headshots, mug shots — photos of oneself convey more these days than snapshots ever did back in
4 the Kodak era. Most digitally minded people continually post and update pictures of themselves at professional, social
5 media and dating sites such as LinkedIn, Facebook, Match.com and Tinder. For better or worse, viewers then tend to
6 make snap judgments about someone's personality or character from a single shot. As such, it can be a stressful task to
7 select the photo that conveys the best impression of ourselves. For those of us seeking to appear friendly and trustworthy
8 to others, a new study underscores an old, chipper piece of advice: Put on a happy face.
9 A newly published series of experiments by cognitive neuroscientists at New York University is reinforcing the
10 relevance of facial expressions to perceptions of characteristics such as trustworthiness and friendliness. More
11 importantly, the research also revealed the unexpected finding that perceptions of abilities such as physical strength are
12 not dependent on facial expressions but rather on facial bone structure.
13 The team's first experiment featured photographs of 10 different people presenting five different facial expressions
14 each. Study subjects rated how friendly, trustworthy or strong the person in each photo appeared. A separate group of
15 subjects scored each face on an emotional scale from "very angry" to "very happy." And three experts not involved in
16 either of the previous two ratings to avoid confounding results calculated the facial width-to-height ratio for each face. An
17 analysis revealed that participants generally ranked people with a happy expression as friendly and trustworthy but not
18 those with angry expressions. Surprisingly, participants did not rank faces as indicative of physical strength based on
19 facial expression but graded faces that were very broad as that of a strong individual.
20 In a second survey facial expression and facial structure were manipulated in computer-generated faces.
21 Participants rated each face for the same traits as in the first survey, with the addition of a rating for warmth. Again,
22 people thought a happy expression, but not an angry one, indicated friendliness, trustworthiness — and in this case,
23 warmth. The researchers then showed two additional sets of participants the same faces, this time either with areas
24 relevant to facial expressions obscured or the width cropped. In the first variation, for faces lacking emotional cues,
25 people could no longer perceive personality traits but could still perceive strength based on width. Similarly, for those
26 faces lacking structural cues, people could no longer perceive strength but could still perceive personality traits based on
27 facial expressions.
28 In a third iteration of the survey participants had to pick four faces out of a lineup of eight faces varied for
29 expression and width that they might select either as their financial advisor or as the winner of a power-lifting competition.
30 As might be expected, participants picked faces with happier expressions as financial advisors and selected broader
31 faces as belonging to power-lifting champs.
32 In a final survey the researchers generated more than 100 variations of one individual "base face" by varying facial
33 features. Participants saw two faces at a time, and then picked one as either trustworthy or high in ability or as a good
34 financial advisor or power-lifting winner. Using these results, a computer then created an average face for each of these
35 four categories, which were shown to a separate set of participants who had to pick which face appeared either more
36 trustworthy, or stronger. Most of the participants found the computer-generated averages to be good representations of
37 trustworthiness or strength — and generally saw the average "financial advisor" face as more trustworthy and the "power-
38 lifter" face as stronger. The findings from all four surveys were published in the *Personality and Social Psychology Bulletin*
39 on June 18.

Questão 15. De acordo com o texto,

- A () são relatados os resultados de quatro pesquisas realizadas por neurocientistas ligados a empresas de recursos humanos.
- B () todos os estudos utilizaram o mesmo método para analisar as fotos, mas os resultados são distintos.
- C () as pesquisas foram encomendadas por gerenciadores de redes sociais como o Facebook e o LinkedIn.
- D () as pesquisas mostram que as pessoas avaliam a confiabilidade observando as expressões faciais do indivíduo.
- E () os quatro estudos apresentam resultados totalmente distintos no que se refere à afetuosidade.

Questão 16. De acordo com o texto,

- A () fotos postadas em redes sociais determinam as habilidades e competências de um candidato a emprego.
- B () fotos digitais postadas nas redes sociais causam as mesmas impressões sobre um indivíduo que fotos analógicas.
- C () a Universidade de Nova York pretende publicar as pesquisas relatadas na reportagem para divulgar características de competência e confiabilidade.
- D () além de credibilidade e competência profissional, a análise das faces revelou dados sobre força física e condição socioeconômica.
- E () a percepção da força física de um indivíduo está relacionada à estrutura óssea da face e não à expressão facial do indivíduo.

Questão 17. Considere as sentenças a seguir:

- I. O primeiro estudo foi realizado com um grupo de 10 participantes e 3 avaliadores.
- II. O segundo estudo ampliou o primeiro, incluindo a avaliação sobre afetuosidade.
- III. O terceiro estudo calculou a força física pela razão entre altura e largura da face.
- IV. O quarto estudo utilizou as mesmas imagens do primeiro estudo.

Está(ão) correta(as)

- A () apenas I e IV.
- B () apenas a II.
- C () apenas II e III.
- D () apenas II e IV.
- E () apenas a IV.

Questão 18. De acordo com o terceiro estudo,

- A () rostos mais largos sinalizam pessoas mais felizes.
- B () rostos mais finos indicam pessoas mais competentes.
- C () rostos mais compridos indicam pessoas mais afetuosas.
- D () rostos mais finos sinalizam pessoas mais confiáveis.
- E () rostos mais largos indicam pessoas mais fortes fisicamente.

Questão 19. Marque a opção em que o item sublinhado denota um qualificador.

- A () Most digitally minded people continually post and update pictures... (linha 4)
- B () For those of us seeking to appear friendly and... (linha 7)
- C () More importantly, the research also revealed the unexpected finding... (linhas 10/11)
- D () An analysis revealed that participants generally ranked people... (linhas 16/17)
- E () Surprisingly, participants did not rank faces as indicative of physical strength... (linha 18)

Questão 20. Todas as frases abaixo contêm adjetivo com flexão de grau, **exceto**:

- A () ...photos of oneself convey more these days than snapshots ever did back in the Kodak era.(linhas 3/4)
- B () ...it can be a stressful task to select the photo that conveys the best impression of ourselves.(linhas 6/7)
- C () ...participants picked faces with happier expressions as financial advisors... (linha 30)
- D () ...and [participants] selected broader faces as belonging to power-lifting champs.(linhas 30/31)
- E () ...and generally saw the average “financial advisor” face as more trustworthy... (linha 37)