

I. Grammar and Vocabulary: find the best answer for each question.

1. Aisha ... a few minutes ago. a) has left b) leaves c) left d) is leaving
2. We to the chess club since we moved here. a) have belonged b) belong
c) belonged d) are belonging
3. The factory over there. a) are b) used to being c) could used d) used to be
4. When he realised I him, he turned and ran away. a) was looking for b) look like
c) had look after d) have be looking forward to
5. When I went the bathroom, I saw that the bath had overflowed. a) for b) in c) at d) into
6. Your eyes are red –? a) Did you cry b) Have you been crying c) Are your crying d) Do you cry
7. 'I can't get access to the data base, they in a new password.' a) have probably put
b) did probably put c) probably are putting d) probably have been putting
8. Water at 100 °C, everyone knows that! a) boiling b) bounce c) boils d) has bounced
9. He one of his special desserts since your birthday. a) have made b) hasn't made
c) made d) didn't make
10. Sam has never me the truth about his childhood. a) told b) said c) mentioned d) revealed
11. I.... Dr Evans next week. a) have seen b) am seeing c) sees d) will seen
12. Is Michael a friend of? a) its b) our c) yours d) her
13. "The next train to Dublin at 3:45" (station announcement)
a) will leaves b) is leaving c) is going leave d) leaves
14. When you.... Ben, tell him he still owes me some money. a) is seeing b) will see
c) see d) are going to see
15. Alex after his children on Wednesdays. a) usually is looking b) has looked usually
c) have usually looked d) usually looks
16. She is the scientist partner was awarded a music award. a) who b) whose c) which d) that
17. There demonstrations since they announced pensions would fall by 2%. a) are b) are being
c) have been d) was
18. We forward to this holiday for ages. a) are looking b) look
c) have been looking d) have been looked
19. We are late! The match by now! a) probably is starting b) have started probably
c) has probably started d) probably starts
20. They in 2015. a) married b) have married c) married each other d) have married to each other
21. The car is parked outside the house is her stepfather's. a) who b) whose c) Ø d) that
22. The idea was implemented by, not by ! a) he / she b) him parents / theirs
c) mine / you d) our relatives / us
23. This should be the day ... we finally meet them. a) when b) whose c) where d) which
24. Our parents in a car accident many years ago. a) dead b) have died c) died d) have dead
25. your homework yet? a) Has you done b) Did you do c) Did you done d) Have you done
26. When his neighbours in ? a) has / moved b) did / moved c) did / move d) have / move
27. I've lost my book, could you lend me? a) yours b) you c) our d) us
28. Liam five next week. a) turn b) turned c) has turned d) is turning
29. I don't remember is why they refused to take part in the exhibition. a) Which b) What c) Ø d) That

30. I have actually never met parents. a) there b) them c) theirs d) their
31. They.... when I entered the room. a) were arguing b) had argue
c) have argued d) have been arguing
32. We hope they will be here.... a) short b) shortly c) in short d) currently
33. I was cooking while she the problem. a) solves b) has solved c) was fixing d) had fix
34. I can't hear what they a) will say b) has said c) sayed d) are saying
35. I thought you in Chicago! a) was b) have been c) are d) were
36. It is the most ambitious proposal
- a) we have ever submitted b) we are still submitted
c) we submitted yet d) we are always submitting
37. My brother last month. a) is born b) was born c) born d) has been born
38. Despite yesterday's snowfalls, we.... home in less than an hour last night.
a) could not driven b) can drive c) were able to drive d) are not able to be driving
39. "How long have you lived in Belgium?" "I've lived here a couple of years now."
a) since b) for c) in d) pendant
40. He finally me about the accident but then we got interrupted by the noise.
a) tells b) has told c) is telling d) told
41. Could I speak Tom please? a) Ø b) at c) for d) to
42. I'll leave sandwiches in the fridge in case you hungry when you come home.
a) are b) have c) will be d) will have
43. I her when we met at the harbour. a) didn't recognize b) have recognize
c) don't recognized d) did recognized
44. I haven't eaten fish and chips I came home last summer. a) for b) ago c) since d) during
45. When I saw the stranger, I asked him why he through the keyhole.
a) looks b) have looked c) was looking d) had look
46. When you are at the butcher's, to get a bone for the dog. a) remember b) recall c) remind d) memorize
47. Do you actually want in an engineering school? a) study b) studied c) studiing d) to study
48. When your first mobile phone? a) you got b) you had c) did you get d) had you
49. «Bags must be at the desk», said the notice in the art gallery. a) left b) let c) leave d) live
50. In some places, pigs to find truffles. a) is using b) are used c) use d) can be use
51. They had to withdraw from the contest because it was.....
a) passionate b) astonished c) absorbed d) time-consuming
52. I'll agree with you'll say. a) wherever b) whenever c) whatever d) whoever
53. It's all your fault, so just blame ! a) themselves b) each other c) yourself d) one another
54. July 20, 1969, astronauts Neil Armstrong and Buzz Aldrin landed the moon.
a) In / on b) On / in c) In / in d) On / on
55. Tom went to the premises and he visited the new factory. a) moreover b) also c) too d) as well
56. Wars have claimed the lives of people. a) millions b) millions of c) million of d) million
57. I've been racking my brain, but I think of the French for "cosy". a) shall b) mustn't c) should d) can't
58. Everyone should push beyond comfort zone. a) his b) her c) your d) their
59. They didn't understand about that film! a) everywhere b) nowhere c) something d) anything
60. You live with Chris, you? a) don't b) does c) can d) aren't
61. I had such a headache yesterday that I complete my task. a) could b) can c) can't d) couldn't
62. Suzy decided to have a go, she didn't regret afterwards. a) what b) whom c) when d) which
63. The town in I grew up is very small. a) where b) that c) which d) Ø

II. Reading comprehension: read the texts and choose the answer that best corresponds to the text.

Text 1

Robot jurisprudence: How to judge a 'bot

WHEN the autonomous cars in Isaac Asimov's 1953 short story "Sally" encourage a robotic bus to dole out some rough justice to an unscrupulous businessman, it appears that the bus has contravened Asimov's first law of robotics, which states that "a robot may not injure a human being or, through inaction, allow a human being to come to harm".

Asimov's three laws are merely a bit of science fiction that is often taken to be a serious basis for robot governance. But robotic devices raise many thorny legal, ethical and regulatory questions. For instance, if an autonomous car is involved in an accident, who is to blame? And bionic technologies that enhance or become part of humans are trickier still. If an assistive exoskeleton is implicated in a death, who is at fault? If a brain-computer interface is used to communicate with someone in a vegetative state, are those messages legally binding?

It was questions such as these that led to the setting up in 2012 of a project called RoboLaw, largely funded by the European Union. Consisting of experts in areas such as law, engineering, philosophy, regulation and medicine, the group presented their report, called "Guidelines on Regulating Robotics", to a special session of the European Parliament in September. The report's recommendations are designed to help legislators successfully manage the introduction of new robotic and human-enhancement technologies into society without compromising principles already enshrined in European law.

The report's authors warn against "excessively restrictive" legislation that can stifle innovation. They recommend a "functional perspective" that concentrates on the practical use of robotics when drawing up any robot-specific laws. Broad, overarching legislation—such as Asimov's three laws—is likely to fail, says Andrea Bertolini, of the Scuola Superiore Sant'Anna, in Pisa, Italy, which led the RoboLaw group. Instead, ad hoc legislation could be used to steer the development of the market in specific directions. That is an important suggestion when the term "robot" covers such a diversity of devices, from medical equipment to drones and vacuum cleaners.

Stringent product-safety rules, for example, might discourage the development of advanced prostheses and exoskeletons, a set of technologies that the European Union is keen to support. Liability exemptions for manufacturers could relieve some pressure. "No-fault" plans, especially in cases where an insurance market for robotic devices is difficult to establish, could help too. Manufacturers and governments might pay into a compensation fund to be used if mishaps occur.

Prostheses also raise questions about the legal distinction between person and property, but the report suggests that there is no advantage to creating a new category between human and machine. As Dr Bertolini puts it: "A human with a prosthesis is still a human."

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101- Which is WRONG according to Asimov?

- a) A robot cannot injure a human being
- b) A robot might not injure a human being
- c) A robot must not injure a human being
- d) A robot may injure a human being

102- In "Asimov's three laws are merely a bit of science-fiction", which is closest in meaning to "merely"?

- a) merrily
- b) simply
- c) seriously
- d) admittedly

103- Where are the answers given to questions raised by robotic and bionic technologies?

- a) In Isaac Asimov's 3 laws
- b) In a report
- c) in Robolaw
- d) in European law

104- In the phrase "trickier still" in paragraph 2, which is closest in meaning to "trickier"?

- a) more magical
- b) quieter
- c) more mobile
- d) more difficult

105- Which was NOT mentioned in the text?

- a) Robolaw was a project mainly funded by the E.U.
- b) They want to keep the principles of European Law
- c) The group consisted of experts in engineering, medicine and language
- d) The group presented their report to the Parliament

106- What does the group advocate for?

- a) legislation that is too restrictive
- b) studying the way robots are used
- c) large legislation
- d) specific legislation to cover all kinds of robotic devices

107- What would the E.U. like to do above all?

- a) issue product-safety rules
- b) develop advanced prostheses
- c) avoid new robotic technologies
- d) stifle innovation

108- What could discourage the development of new technologies?

- a) overly strict product-safety rules
- b) exemptions for manufacturers
- c) "no-fault" plans
- d) compensation funds

Concentrating for long periods builds up chemicals that disrupt brain functioning.

A workday filled with a string of mentally demanding tasks can leave you feeling **drained**. After long hours of mentally tracking one thought to the next, you're probably more likely to choose a relaxing evening of streaming TV shows than **to tackle a tough task** on your to-do list or to make time on a creative pursuit. A new study provides a biological explanation for this familiar phenomenon: thinking hard leads to a buildup of chemicals that may disrupt the functioning of the brain.

For some time, scientists have struggled to find an explanation for why our mental resources **get depleted**. Researchers have hypothesized that long periods of **strenuous mental effort** lead to a depletion of glucose and other key resources that supply the energy-hungry brain. Early experiments in the 2000s supported this notion—reporting that people experienced a reduction in blood glucose after a cognitively demanding task and that consuming a sugar drink could boost performance. **But subsequent work failed to reproduce those findings**. “If you look at all of the studies together, there has been, on average, no effect,” says Antonius Wiehler, a cognitive neuroscientist at Pitie-Salpetriere Hospital in France.

In a previous study published in 2016, Wiehler's Pitie-Salpetriere colleague Mathias Pessiglione and his team demonstrated that long periods of mentally effortful tasks made people more likely to choose immediate gratification over waiting for a bigger reward much later (\$40 now versus \$50 in two weeks, for example). This behavioral change was accompanied by a decrease in brain activity in the lateral prefrontal cortex (LPFC), an area involved in cognitive processes such as decision-making. The result left the team with the question of what was causing this change in brain activity.

To probe that question further in the new study, published in *Current Biology* on August 11, Pessiglione, Wiehler and their colleagues recruited 40 volunteers to follow up on the earlier work. Participants had to spend around six and a half hours at the lab—the approximate equivalent of a full workday—performing repetitive but mentally challenging tasks. Among them was the “N-back” task, which asked individuals to recall a letter that appeared on a screen “N” number of trials before. **The subjects were split into two groups**: one was assigned a difficult version of these tasks, while the other was given a simpler version. Although both groups reported feeling similar levels of exhaustion after the daylong experiment, only **those who had been given the harder task were more likely to choose** to take home an immediate reward rather than wait for a larger cash-out at a later date.

To determine what was going on, the team used magnetic resonance spectroscopy, a form of magnetic resonance imaging that enables researchers to detect levels of certain chemicals in the brain. The investigators found that people **who had undertaken the harder task** had higher concentrations of the neurotransmitter glutamate in the LPFC than those who had performed the easier one. They also found an increased level of glutamate diffusion in the difficult group, indicating that the molecules were moving faster—which, according to Wiehler, suggests the chemical was building up outside cells, where its movement was less constrained.

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109- In “a string of mentally demanding tasks can leave you feeling drained”, “**drained**” means that it can make you feel :
a) energetic b) efficient c) depressed d) exhausted

110- “**to tackle a tough task**” means:
a) to engage in a tough task b) to give up on a tough task
c) to think of a tough task d) to disapprove of a tough task

- 111- In “why our mental resources get depleted”, “**get depleted**” means that the resources tend to:
a) wear out b) build up c) multiply d) strengthen
- 112- In “strenuous mental effort”, “**strenuous**” is synonymous with:
a) stressful b) intense c) discontinued d) little
- 113- “**But subsequent work failed to reproduce those findings**” means:
a) there was no further proof of the findings
b) no experiments were carried out that showed reduction in blood glucose
c) the experiment was never reproduced
d) the scientists quickly gave up on these experiments
- 114- “**To probe that question further in the new study**” means:
a) to get rid of that question b) to focus on that question
c) to go deeper into that question d) to evade that question
- 115- “The subjects **were split into two groups**” means that the subjects:
a) were divided into two groups b) were confronted with other groups
c) fell over two groups d) were opposed to two groups
- 116- “**those who had been given the harder task were more likely to choose...**” means:
a) those who had been given the harder task would probably choose
b) those who had been given the harder task would never choose
c) those who had been given the harder task were not allowed to choose
d) those who had been given the harder task couldn’t possibly choose
- 117- “**who had undertaken** the harder task” means:
a) who had finished b) who had given up c) who had carried out d) who had ignored

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