

# 外研社杯·国才杯·2018 年阅读大赛初赛第一场

## Questions 1-3 (Suggested completion time: 3 minutes)

Directions: Read the following quotes and choose the correct author for each quote. Please note there are two extra options you do not need.

- |                        |  |
|------------------------|--|
| A. Victor Hugo         | 1. It is my ambition to say in ten sentences what others say in a whole book.                                |
| B. Ralph Waldo Emerson |  |
| C. Friedrich Nietzsche | 2. There are two motives for reading a book; one, that you enjoy it; the other, that you can boast about it. |
| D. Rabindranath Tagore |  |
| E. Bertrand Russell    | 3. If we encounter a man of rare intellect, we should ask him what books he reads.                           |

## Question 4 (Suggested completion time: 2 minutes)

Directions: Read the text and answer the question according to the text.

At business school, you' ll interact closely with talented individuals from all over the globe, which enhances the experience by exposing you to different business practices, cultures and points of view.

The connections you make are, for many, the single most valuable aspect of the MBA, so make sure you capitalize on the opportunities in and out of the classroom during your MBA studies. Your alumni network helps you stay connected to the university as well as to countless professional opportunities you can tap into throughout your career.

While the quality of the education at the most elite programs is guaranteed across the board, when you' re spending two years of your life and paying more than \$100,000, it' s the network of contacts you build that makes your MBA experience truly priceless.

4. Which of the following would be the best title for the text?

- A) How to Make Your MBA Study a Success
- B) Tuition for High-quality MBA Programs
- C) How to Build up Connections through MBA Programs
- D) Career Benefits from MBA Programs

**Question 5 (Suggested completion time: 2 minutes)**

**Directions:** *Read the text and answer the question according to the text.*

If you wait till you are old to discover that life is usually long enough to get plenty done if we make the right choices, it will be too late, Seneca thought. ① Having white hair and wrinkles doesn’ t guarantee that an old person has spent much time doing anything worthwhile, even though some people mistakenly act as if it does. ② Someone who sets sail in a ship and is carried this way and that by stormy winds hasn’ t been on a voyage. He’ s just been tossed about a lot. ③ Being out of control, drifting through events without finding time for the experiences that are most valuable and meaningful, is very different from truly living. ④

5. Which blank does the following sentence best fit in?

***So it is with life.***

- A) ①                      B) ③                      C) ④                      D) ②

**Question 6 (Suggested completion time: 2 minutes)**

Directions: Read the text and answer the question according to the text.

Kamenetz, lead digital education correspondent for National Public Radio, is the more soothing voice. She points out that not every child — or even every heavy screen user — will suffer ill effects. As with food allergies, “For lots of kids, a peanut is just a peanut.” She advocates an approach inspired by Michael Pollan’ s well-known dictate on food: “Enjoy screens. Not too much. Mostly with others.” (Her most upsetting conclusion, echoed by Riley and the American Academy of Pediatrics, is that parents should watch alongside toddlers.)

6. What is Kamenetz’ s attitude toward children’ s screen time?

- A) Except for little kids, screen time is not so worrisome.
- B) Excessive screen time leads to bad effects.
- C) Even heavy screen users do not fall into troubles.
- D) Too much screen time triggers food allergy.

**Question 7 (Suggested completion time: 2 minutes)**

Directions: Read the text and answer the question according to the text.

“Go now, before it’ s too late.” They have been saying this about Cuba for years. But somehow, the Caribbean’ s biggest island never seems to shed its charm — and those who know it best rarely believe it ever will.

Of course, more people than ever want to see the faded grandeur of Havana and the island’ s enchanting coast and countryside — and who can blame them? But Cuba’ s hotels aren’ t always able to cope with demand, which is one of the reasons that this trip is so extraordinary. Avoid all the uncertainties of land touring in the most supremely comfortable style possible: on board the world’ s first Discovery Yacht, Scenic Eclipse.

7. What is the purpose of the text?

- A) To introduce a cruise line to Cuba.
- B) To persuade tourists to go to the Caribbean.
- C) To make a complaint about Cuba’ s hotels.
- D) To show the grandeur of Havana.

**Question 8 (Suggested completion time: 2 minutes)**

Directions: Read the text and answer the question according to the text.



The latest study found people with a stronger grip could solve more logic problems in two minutes and remember more numbers from a list, as well as reacting more quickly to visual stimuli. Lead author Dr. Joseph Firth, an honorary research fellow at the University of Manchester, said: “We can see there is a clear connection between muscular strength and brain health. But what we need now are more studies to test if we can actually make our brains healthier by doing things which make our muscles stronger — such as weight-training.”

8. What does Dr. Joseph Firth's study tell us?

- A) Brain health can be improved by training muscles.
- B) Stronger handshake shows better brain health.
- C) Reaction has something to do with body health.
- D) There is a connection between reaction and memory.

**Question 9 (Suggested completion time: 2 minutes)**

Directions: Read the text and answer the question according to the text.

Airbnb started in 2008 when co-founders Brian Chesky and Joe Gebbia launched a website to rent out two airbeds in their San Francisco apartment during a conference to make some extra cash. (Hence the website name, which stood for "airbed and breakfast"). The site's popularity has taken even the co-founders by surprise.

"At first, we thought, surely you would never stay in a home because you wanted to, you would only stay there because it was cheaper," Chesky told *the Atlantic* in 2013. "But that was such a wrong assumption. People love homes. That's why they live in them. If we wanted to live in hotels, more homes would be designed like hotels."

9. Why is Airbnb popular among customers?

- A) Customers enjoy staying in home-like places.
- B) Consumers are attracted by hotel designs.
- C) It offers cheaper food and accommodation.
- D) It provides better service than hotels.

**Question 10 (Suggested completion time: 5 minutes)**

Directions: The figure shows people's satisfaction with the standard of living, personal relationships and health among different age groups in Canada in 2016. Answer the question according to the information in the figure.

10. Which of the following is an INCORRECT description about the figure?

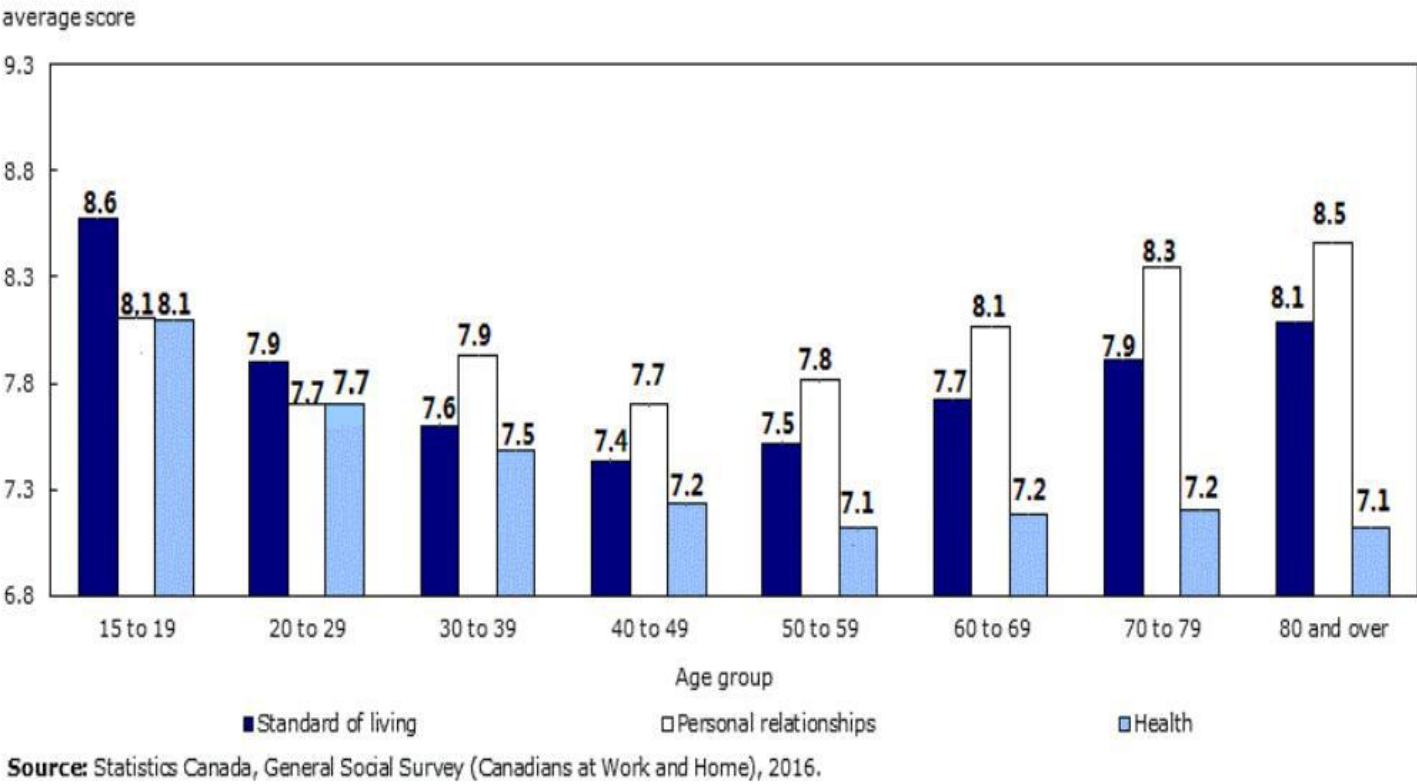
- A) With respect to personal relationships, seniors have higher levels of satisfaction than all the other age groups: those aged 80 and over have the highest average satisfaction.
- B) Satisfaction with the standard of living and personal relationships is relatively higher among the youngest and oldest age groups, revealing an U-shape in both satisfaction levels among all age groups.
- C) The data show that satisfaction with health in general decreases with age: the average satisfaction with health varies from 8.1 for the youngest age group to 7.1 for age groups of 50 to 59 and of 80 and over.
- D) As to the satisfaction with personal relationships, the level is relatively high among those in the youngest age group, whose satisfaction level is comparably the same to those aged 60 to 69.

Question 11 (Suggested completion time: 4 minutes)

Directions: Read the following definition of a logical fallacy. Answer the question according to the definition.

The Fallacy of Composition

The Fallacy of Composition involves taking attributes of part of an object or class and applying them to the entire object or class. The argument being made is that because every part has some characteristic, then the whole must necessarily also have that characteristic.

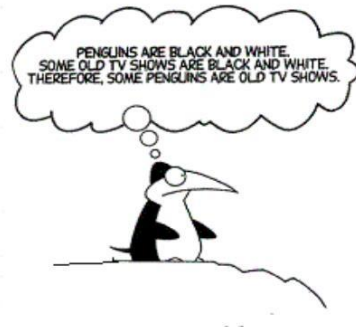


11. Which of the following is NOT an example of *The Fallacy of Composition*?

- A) Each human cell is very lightweight, so a human being composed of cells is also very lightweight.
- B) Because all of the components of this car are entirely white, then the car itself must also be entirely white.
- C) Every song on the album lasts less than an hour. Therefore the album lasts less than an hour.
- D) Because professional sports players are paid outrageous salaries, every professional sports player must be rich.

**Question 12 (Suggested completion time: 4 minutes)**

Directions: Look at the following picture and answer the question.



12. Which of the following logical fallacies does the picture illustrate?

- A) *Dicto Simpliciter*: a fallacy in which a general rule or observation is treated as universally true regardless of the circumstances or the individuals concerned.
- B) *Non Sequitur*: a fallacy in which a conclusion is not aligned with previous statements or evidence.
- C) *Argumentum ad Populum*: a fallacy of attempting to win popular assent to a conclusion by arousing the feeling and enthusiasm of the multitude.
- D) *Converse Accident*: a fallacy of considering certain exceptional cases and generalizing to a rule that fits them alone.

**Questions 13-14 Reasoning (Suggested completion time: 10 minutes)**

Cookiecutter sharks feed on a variety of fishes and mammals by gouging round plugs of flesh out of larger animals. Although attacks on humans are documented, they are rare, and thus these sharks are rightly classified as only a minor threat to people. As many fishes that are not a threat to humans are not endangered, there should be no objection to the new ocean exploration and drilling project, which threatens a cookiecutter shark breeding ground.

**13.** Which of the following points out the most serious logical flaw in the argument above?

- A) The criteria by which to classify cookiecutter sharks as a minor threat to people are not satisfactory.
- B) No information is given to say whether cookiecutter sharks are endangered.
- C) New ocean exploration and drilling could pose risks of oil spills and other pollutions.
- D) There are few studies on the relationship between the new ocean exploration and drilling project and extinction risk of cookiecutter sharks.

**14.**

Admittedly, the practice of allowing students to retake a class they previously failed and receive a new grade is controversial. But the mission of any school or university is to educate their students, and allowing students to retake courses supports this mission. Therefore, for the time being, our school should continue to allow students to retake previously failed courses and receive a new grade.

Which of the following, if true, would most strongly support the argument above?

- A) Many scientists who have made great achievements had the experience of failing courses at university.
- B) Students of different IQ and education levels in the same class are a reality that must be considered.
- C) Students who failed courses are not trouble-makers, and deserve due sympathy.
- D) There has been an increase in the number of calls that everyone has the right to receive moral education and strengthen their moral characters.

**Questions 15-17 (Suggested completion time: 8 minutes)**

Directions: Read the following news report and answer the questions.

An international team of scientists have engineered an enzyme that can “eat” one of the most commonly used plastics, potentially providing a new weapon in the fight against plastic pollution.

The researchers from the University of Portsmouth in the U.K. and the U.S. Department of Energy’s National Renewable Energy Laboratory (NREL) hope that the discovery will eventually enable the full recycling of plastic bottles — of which one million are sold around the world every minute.

The enzyme can digest PET (polyethylene terephthalate), which is used in many products including clothing fibers and plastic bottles. The majority of these bottles, like most plastics, are not recycled, eventually making their way into the environment where they have the potential to remain for hundreds of years without degrading.

And even the bottles that do get recycled rarely get turned back into the original product.

“Many people don’t realize that when they put their plastic bottle in a recycling bin, it’s very rarely made into a plastic bottle,” John McGeehan from the University of Portsmouth’s School of Biological Sciences, told *Newsweek*. “It’s normally downscaled and becomes something of less value.”

“So, what we’re hoping to do with this enzyme, is turn the plastic into its original components so that it can be properly reused in a circular economy. This would avoid the need to drill for more oil and it would decouple the whole oil to plastic scenario that we have,” he said.

The scientists made their breakthrough with a little help from serendipity. They were initially examining a bacterium found in a Japanese recycling plant which produces an enzyme that allows it to eat plastic.

Wanting to understand how this enzyme evolved and how it worked, the researchers tweaked its molecular structure. This had the unintended consequence of making the enzyme’s plastic eating abilities work significantly faster, to the point where it began breaking down the material within just a few days. Their results are published in the journal *Proceedings of the National Academy of Sciences* (PNAS).

“To find an organism that can break this stuff down is really exciting,” McGeehan said.

While their work is still at a very early stage, the researchers hope that they can improve the enzyme further to speed up digestion and incorporate it into viable large-scale processes to be used in industry.

McGeehan concluded that, despite new breakthroughs like this, “We need to start taking more responsibility as a population to stop using so much plastic and to stop having this throwaway plastic lifestyle that we’ve become so accustomed to.”

**15-16. Decide whether the following statements are True or False according to the text.**

**15.** Different from the majority of plastic bottles, a recycled bottle will be turned into its original components.

A) True                      B) False



16. According to McGeehan, we also need to take other measures to win the war against plastic pollution in addition to further improving the plastic-eating enzyme.

- A) True                      B) False

17. According to John McGeehan, what happens to a thrown plastic bottle?

- A) The bottle most probably becomes permanent waste.
- B) Biological scientists can turn it into less valuable materials.
- C) PET in the bottle can be degraded by the discovered enzyme.
- D) Recyclable fibers in the bottle can be extracted and made into something new.

**Questions 18-20 (Suggested completion time: 7 minutes)**

Directions: Read the text about a book. Answer the questions according to the text.

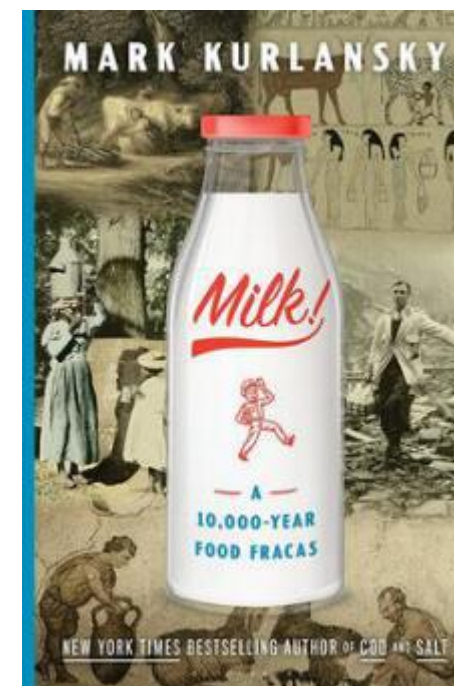
Have you ever tried donkey' s milk? Probably not. But according to Mark Kurlansky' s fact-rich *Milk!*, donkey' s milk is probably closest in consistency and composition to human breast milk. How cows came to predominate our consumption of milk is just one of the many thumbnail histories Kurlansky packs into his fascinating new book.

Only about 40 percent of humans can digest milk as adults. For the rest, Kurlansky explains, after *weaning*, a gene shuts down the ability to process milk. "In truth, the aberrant condition is being able to drink milk," he writes. But then there is cheese, which for most humans escapes genetic determinism. ① There is also butter, yogurt and "everyone' s favorite milk," ice cream, all described vividly here.

Kurlansky divides his book into three parts. The first is a history of the domestication of milk and its byproducts. That narrative flows down many byways. Did you know that French butter makes better pastry than American butter because it contains more fat and less water? Part two is about health safety issues regarding milk — think pasteurization and refrigeration — as production moved from milkmaids to milk machines. ② And part three is a contemporary world tour of milk production and its unusual products.

Every chapter of *Milk!* entrances with I-did-not-know-that facts and observations. ③ His own childhood favorite? Creamed potato leek soup, or vichyssoise.

④ Early in the book, Kurlansky says that milk is "the most argued-over food in human history." A skeptical reader will wonder, but in the end, they will likely be convinced of this statement' s truth.



18. What does the word ***weaning*** in the second paragraph mean?

- A) Stopping feeding a baby on its mother' s milk.
- B) Growing older and showing the traits of increased age.
- C) A change of an animal that makes it incapable to process milk.
- D) A child who is mature behaves in a sensible and reasonable way.

19. Which blank does the following sentence best fit in?

***The book also includes 126 milk-based recipes that Kurlansky thinks are the tastiest.***

- A) ③
- B) ②
- C) ①
- D) ④

20. Which of the following topics CANNOT be found in this book?

- A) Which ingredient is key to tastier desserts
- B) Why donkey' s milk is much less popular than cow' s
- C) What modern milk production line is like
- D) How adults digest milk and other dairy products

**Questions 21-23 (Suggested completion time: 7 minutes)**

Directions: Read the text about a painting. Answer the questions according to the text.

**The Story Behind Monet' s *Women in the Garden***



Claude Monet (1840-1926) created *Women in the Garden* (*Femmes au jardin*) in 1866 and it is generally considered the first of his works to capture what would become his primary theme: the interplay of light and atmosphere. He used a large format canvas, traditionally reserved for historical themes, to instead create an intimate scene of four women in white standing in the shade of the trees beside a garden path.

While the painting isn' t considered to be among his finest works, it did establish him as a leader in the emerging Impressionist movement.

**Working *en Plein Air***

*Women in the Garden* literally began in the garden of a home Monet was renting in the Paris suburb of Ville d-Avray in the summer of 1866. While it would be completed in a studio the following year, the bulk of the work took place *en plein air*, or outdoors.

"I threw myself body and soul into the *plein air*," Monet said in an interview in 1900. "It was a dangerous innovation. Up to that time, no one had indulged in any, not even [Édouard] Manet, who only attempted it later, after me." In fact, Monet and his peers popularized the *plein air* concept, but it had been in use for many years prior to the 1860s, particularly after the invention of

pre-made paint that could be stored in metal tubes for easy portability.

Monet used a large canvas, measuring 6.7 feet across by 8.4 feet high, for his composition.

**[A]** To maintain his perspective while working on such a large space, he later said he had devised a system using a deep ditch and a pulley system that could raise or lower the canvas as needed. **[B]** At least one historian thinks that Monet simply used a ladder or stool to work on the upper area of the canvas and carried it in and out of the house overnight and on cloudy or rainy days.

### The Women

The model for each of the four figures was Monet's mistress, Camille Doncieux. They had met in 1865 when she was working as a model in Paris, and she quickly became his muse. Earlier that year, she had modeled for his monumental *Luncheon in the Grass*, and when he was unable to complete that in time to enter in competition, she posed for the life-size portrait *Woman in a Green Dress*, which went on to win acclaim at the 1866 Paris Salon.

For *Women in the Garden*, Camille modeled the body, but Monet likely took the details of the clothing from magazines and worked to give each of the women different appearances. Still, some art historians see the painting as a love letter to Camille, capturing her in different poses and moods.

**21.** What can we know about the *plein air* concept?

- A) It is fully demonstrated through *Women in the Garden*.
- B) It is popularized by Monet with his peers.
- C) It is painting in the suburb of Ville d'Avray in Paris.
- D) It is initiated by Monet.

**22.** Which of the following roles do the two sentences marked **[A]** and **[B]** play?

- A) The first is the statement the author claims; the second is others' speculation.
- B) The first provides background for the painting; the second is a prediction about the painting.
- C) The first is a statement of a conclusion; the second is the supporting detail.
- D) The first provides details to support a conclusion; the second verifies the validity of the details.

**23.** Which of the following is INCORRECT about Camille?

- A) She started her career as a model in 1864.
- B) The four figures in *Women in the Garden* are all modelled by Camille.
- C) She used to work as a model for Monet.
- D) She has appeared at least three times in Monet's paintings.

**Questions 24-27 (Suggested completion time: 7 minutes)**

Directions: Read the text about instant coffee. Answer the questions according to the text.

**The Truth about How Instant Coffee Is Actually Made**

In this day of coffee elitism, the instant choice is not typically ***heralded***. But that doesn't mean instant coffee doesn't have its fans – many of our parents, for example, willingly drink the stuff every single morning.

While instant coffee is a godsend in baking for its strong flavor, dry texture and ability to dissolve, most of us know that it tastes inferior to freshly ground beans. But how many of us know what it actually is? It's been around for over a hundred years, so it might be time we all finally found out.

First, the obvious: instant coffee is in fact made from real coffee. Whole beans are roasted, ground and brewed before they start their journey to becoming instant. What makes coffee instant is when all the water is removed from the brewed product, leaving behind dehydrated crystals of coffee. To make it coffee again, you just add water.

There are two ways to make instant coffee: spray drying and freeze drying. Spray drying is achieved by spraying liquid coffee concentrate as a fine mist into very hot, dry air (we're talking about 480 degrees F). When the coffee hits the ground, the water has been evaporated and it has been dried into small, round crystals.

Freeze drying coffee involves a few steps. First, the coffee is cooked down into an extract. The coffee extract is chilled at about 20 degrees F into a coffee slushie. The coffee slushie is then further chilled on a belt, drum or tray to -40 degrees F until it forms slabs of coffee ice. The coffee ice is broken into granules. They're then sent to a drying vacuum, where the ice vaporizes and leaves behind instant coffee granules.

**24.** The word ***heralded*** in the first paragraph most probably means \_\_\_\_\_.

- A) delivered
- B) approved
- C) praised
- D) demanded

**25-27. Decide whether the following statements are True or False according to the text.**

**25.** Instant coffee is actually tiny crystals dried from real coffee.

A) True                      B) False

**26.** Drying out is a fundamental procedure in both instant coffee making methods.

A) True                      B) False

**27.** Spray drying is inferior to freeze drying, because exposure to heat can cause coffee beans to lose the original flavor.

A) True                      B) False

**Questions 28-30 (Suggested completion time: 8 minutes)**

Directions: Read the text about nicotine. Answer the questions according to the text.

Nicotine is the addictive chemical in tobacco smoke and e-cigarette vapors. And doctors say the teenage brain is no place for it to end up. Nicotine can reach the brain within seven seconds of puffing on a cigar, hookah (水烟袋), cigarette or electronic cigarette.

The area of the brain responsible for emotions and controlling our wild impulses is known as the *prefrontal cortex*. It's very vulnerable to nicotine's effects, research shows. This is especially true for young people. The reason: This part of the brain doesn't finish developing until about age 25.

Nicotine acts like a key to unlock special receptor molecules on the outside of cells in the brain, including those in the prefrontal cortex. Nicotine causes these cells to release signaling molecules, such as *dopamine*. These chemical signals travel across a gap between nerve cells (called a *synapse*). When they reach the neighboring nerve cell, they release their "message." And it gives users a feel-good high.

But after repeated exposure to nicotine, those brain cells can change. The effect of these changes is to reduce the body's ability to release its own, natural pleasure-giving chemicals.

Meanwhile, the brains of teens who smoke or vape may create more receptors to handle the flood of nicotine they have come to expect. As the number of receptors increases, teens will need more nicotine to get the same high. That makes nicotine users seek hit after hit. In teens, this can provoke side effects. For instance, it can make it hard for them to stay focused. It might also trigger bouts of depression or anxiety, research suggests.

Some of the negative effects of nicotine on the young brain will fade with time — if exposure ends. Others, however, may persist. For instance, brain scientists at VU University Amsterdam found that exposing

adolescent rats to nicotine increased their impulsive behavior. It made them a bit more reckless than usual. It also made it harder for them to focus their attention — even later, as adults.

No one is sure that the same thing happens in humans, but that’s the concern. Exposing the developing adolescent brain to nicotine “could lead to a high risk of lifelong addiction,” says Garry Sigman. He heads adolescent medicine at the Loyola University Chicago Stritch School of Medicine in Maywood, Illinois.

28. Which of the following is the best title for the text?

- A) Tobacco, Nicotine, and E-Cigarettes
- C) Explainer: The Nico-Teen Brain
- B) Nicotine Addiction: Symptoms and Treatments
- D) The Vape Debate: What You Need to Know

29. Which of the following is NOT true about the prefrontal cortex?

- A) It has receptor molecules that could be unlocked by nicotine.
- C) It controls cognition and personality forming.
- B) It regulates emotional and behavioral functioning.
- D) It is very vulnerable to nicotine’s effects especially for young people.

30. Which of the following is correct according to the text?

- A) Nicotine may cause human to act irrationally and may lead to difficulty in attention control.
- C) Even after the age of 25, adults could still get into lifelong addiction of nicotine.
- B) Nicotine has little effect on the prefrontal cortex of an adult mainly because this part of brain has fully developed.
- D) With the lapse of time, some negative effects of nicotine on the brain of young people will disappear gradually.

Questions 31-40 (Suggested completion time: 35 minutes)

Directions: Read three passages about driverless cars. Answer the questions according to the passages.

Passage A

Approximately 1500 - Leonardo Da Vinci’s Self-Propelled Cart

Even though automobiles wouldn’t be invented for another three centuries, Leonardo da Vinci laid out the design for a cart that could move on its own. Using the tension from springs to propel the cart, steering could be set in advance to follow a predetermined path. This invention is considered by some to be the world’s first robot.

1866 - The Whitehead Torpedo

In the mid-1800s, Robert Whitehead developed a way for torpedoes to propel themselves underwater several hundred yards, maintaining depth and direction.

A game-changer for naval fleets at the time, the invention quickly spurred further development and by WWII torpedoes could home in on targets using sonar technology. This new technology would lead to advancements in aircraft and weapons — and eventually autonomous devices like self-driving cars.

### **1925 - The “American Wonder”**

In 1925, Francis P. Houdina developed an automobile that could be controlled remotely by radio signals. He publicly demonstrated the driverless, radio-controlled car, called the “American Wonder” or “Phantom Auto,” on New York City’s streets, travelling along Broadway and Fifth Avenue during a traffic jam.

### **1945 - Teetor Cruise Control**

While not commercialized until 1958, cruise control was actually invented 13 years earlier by engineer Ralph Teetor. Teetor hated riding with his attorney, who would slow while talking and speed up while listening, so he developed an electromagnet contraction that would smooth out the ride, thus inventing cruise control.

### **1979 - The Stanford Cart**

Worked on by a number of Stanford University researchers over the 1960s and the 1970s, the Stanford Cart began as a moon rover project. In 1966, the project was taken over by the Stanford Artificial Intelligence Lab (SAIL), which pioneered the video processing technology that would later be used to provide input to autonomous vehicles. In 1979, the cart successfully traversed a cluttered room without any human input.

### **1987 - Dynamic Vision**

In 1987 German engineer Ernst Dickmanns outfitted a Mercedes-Benz van to detect objects on the road from a series of cameras outfitted on the vehicle. This “dynamic vision” technology processed visual input while taking into account time delays, and provided commands to the car’s steering, throttle and brake systems. This imaging is now used in cars equipped with driver-assist features such as lane recognition, adaptive cruise control and pre-collision braking, as well as in the earliest models of self-driving vehicles to identify and avoid potential road hazards.

### **1995 - General Atomics MQ-1 Predator**

The MQ-1 Predator, developed by General Atomics for the U.S. Department of Defense in the 1990s, remains one of the most widely used pieces of military equipment in service today. Categorized as an unmanned aerial vehicle (UAV), the Predator is commonly referred to as a “drone” because it is piloted remotely using radio and satellite signals. Predator drones were first deployed in 1995 and have been used in military operations for more than 20 years. Technologies used in these drones have been adapted for cars, including radar that can see through smoke or clouds and thermal imaging cameras that enable travel at night.

### **2004 - DAPPA Grand Challenge**

First launched in 2004, the DARPA Grand Challenge was a series of prize competitions created to encourage development of autonomous vehicle technologies. The first competition required vehicles to self-navigate 150 miles of desert roadway. While no car completed the route in the first year of the competition, subsequent challenges have seen dramatic leaps in capabilities. The Urban Challenge in 2007 required vehicles to

obey all traffic laws as they detected and avoided other robots on the 60-mile urban course.

### **2009 - Google Self-Driving Car Project**

In 2009, Google launched its self-driving car project. Using GPS, remote light-ranging technology and other sensory devices, Google’ s fleet can detect pedestrians, cyclists, vehicles, road work and more for up to 240 yards in any direction. The aim is to fully emulate the behavior of the ideal human driver. In 2015, the company started testing its fully self-driving cars on public roads.

### **2015 - Tesla Autopilot**

Tesla Motors released its semi-autonomous “Autopilot” software in 2015, which includes hands-free control of highway and freeway driving, automatic lane changing, side-collision warnings and automatic parallel parking. What’ s more, it was delivered as a software update to Model S owners overnight.

### **2017 - Waymo Early Rider Program**

In 2016, Google’ s autonomous car project became Waymo, a self-driving technology company. In 2017, Waymo invited residents of Phoenix, Arizona, to join in a public trial of self-driving vehicles and provide feedback on their experience, which will be used to shape the future of how self-driving cars work. While Waymo is staying tight-lipped about a potential release date, it’ s anticipated that self-driving cars of some sort will be commercially available by 2020.

## **Passage B**

Q: How realistic is it that the general public will be using driverless cars in the near future?

A: The hype surrounding autonomous vehicles has been growing as just about every car manufacturer and many high-tech firms race to be the first to market.

The rewards — both financially and in saving human lives — are clear. Traffic accidents create billions of dollars of damage and over 40,000 traffic related fatalities every year.

### **Autonomous Car Levels**

There are currently five defined levels of autonomous vehicles according to the National Highway Traffic Safety Administration:

- **Level 0** — No Automation; fully human controlled
- **Level 1** — Driver Assistance; adaptive cruise control, basic steering assistance
- **Level 2** — Partial Autonomy; simultaneous control of steering, acceleration and braking, but still requires active participation of human driver
- **Level 3** — Conditional Autonomy; the vehicle can drive itself in the proper conditions, but a driver must be available to take over at any moment
- **Level 4** — Highly Autonomous; very little need for human intervention, but generally in limited “geofenced” environments



· **Level 5** — Fully Autonomous; able to perform like a human driver in every scenario or environment

The first real “autonomous” cruise control was introduced in 1995 (Level 1), while most of today’s new cars incorporate technology that would be considered Level 2.

Most of the test vehicles that you may see on public streets are Level 3 prototypes, which is why there’s always someone behind the wheel.

Google has actually been testing Level 4 vehicles in Phoenix since last October, where there is no one behind the steering wheel but it’s limited as to where it can drive.

### **Transition Challenges**

The technology continues to evolve but we’re a long way from the utopian world where all vehicles are self-driving.

We have to develop the regulations, insurance models, liabilities and even moral guidelines for technology that never existed before.

Even if traffic fatalities are cut in half by autonomous vehicles, the moral outrage over a single death at the hands of a machine will exist.

Integration with human drivers will be another challenge, as these ultracautious automated vehicles and aggressive human drivers will have to figure out how to get along.

I experienced this firsthand this year at CES (Consumer Electronics Show) as I rode in a Level 3 vehicle on the streets of Las Vegas. I equated the experience to having my grandmother driving me around as the vehicle waited to turn right at a crosswalk causing the human driver behind us to lay into his horn.

The vehicle also slowed down every time it perceived an adjacent car drifting toward our lane.

### **Passage C**

Driverless vehicles are considered to be inevitable. One of the chief arguments that proponents use is that autonomous vehicles will be safer than those driven by humans because they will be programmed to not take chances.

The chief concern about driverless vehicles has been the economic fallout, in that 5 million Americans make their living by driving.

The first fatal crash involving a driverless car should at least slow the rush to replace humans behind the wheel. Tuesday (Mar. 19, 2018) in Phoenix, a self-driven Uber Volvo SUV struck and killed Elaine Herzberg, 49, of Mesa, Arizona, as she walked her bicycle along the street. An Uber employee was behind the wheel but did not intervene.

At the time of the crash, the car was traveling 40 mph (miles per hour) in a posted 35 mph zone. Phoenix police say that the vehicle struck the victim as she emerged from shadows into bright sunlight.

Those conditions illustrate the complexity inherent replacing humans with computers. The variety of factors in driving is infinite, from weather to road conditions to the movements of other vehicles and pedestrians, to complex intersections with complex signaling and so on.

It is entirely possible that a human driver might have struck Herzberg under the same circumstances, but that just raises another question. A human driver is legally responsible for his actions; who is responsible when

an autonomous vehicle kills someone?

After the crash, Uber temporarily suspended its autonomous vehicle operations in Phoenix, San Francisco, Toronto and Pittsburgh.

But this week, the pace of driverless vehicle deployment quickened with Gatwick Airport’ s (near London) announcement that it plans to use driverless electric buses to shuttle passengers from terminals to planes, and driverless vehicles to move baggage.

The Phoenix fatality proves that autonomous vehicles are not infallible and that there should be no rush to put driverless cars, buses and big trucks on the highways.

**31-33 Complete the following sentences based on Passage A by choosing the related names.**

A. Ernst Dickmanns	<b>31.</b> is a German pioneer of “dynamic vision” technology and of driverless cars which could detect and avoid objects on the road.
B. Francis P. Houdina	<b>32.</b> developed a way for torpedoes to self-propel, which greatly changed fleets.
C. Leonardo da Vinci	<b>33.</b> invented speed control on a cruise so as to avoid the sudden slowing down and speeding up when riding with others.
D. Ralph Teetor	
E. Robert Whitehead	

**34.** Which of the following statements is TRUE according to Passage A?

- A) Waymo has claimed that their first self-driving car will be put on market in 2020.
- C) “Autopilot” was released in the same year when Google launched its first self-driving car.
- B) Thermal imaging cameras and radar were first used for military purposes rather than cars.
- D) The DARPA Grand Challenge was established to promote the development of self-driving cars.

**35.** Which of the following is correct according to Passage A and Passage B?

- A) The Tesla Autopilot Motors are Level 5 driverless cars.
- C) The “Dynamic Vision” self-driving cars are approximately on Level 3.
- B) The Waymo Early Rider Program will invent Level 5 autonomous cars.
- D) The Teetor Cruise Control is approximately on Level 1.

**36.** Which of the following is NOT mentioned in Passage B as the challenges that driverless cars would face?

- A) Moral issues.
- C) Integration with human drivers.
- B) Lack of regulations and guidelines.
- D) Unemployment.

**37.** What does the author of Passage B feel about the driverless car when experiencing it at CES?

- A) It was better than with a human driver.
- B) It drove too cautiously.
- C) It looked fancy on road.
- D) It ran as an old lady.

**38.** What does the author of Passage C conclude from the first fatal crash involving a driverless car?

- A) Driving a car is such a complicated task that by far only human can do.
- B) A driverless car is a dream that can never come true.
- C) It is too dangerous to put a car under the full control of a computer.
- D) Human drivers should not be responsible for autonomous car accidents.

**39.** Which of the following is the best title for Passage C?

- A) The Tragedy Caused by Driverless Cars
- B) Put Brakes to Driverless Cars
- C) The Challenges to Driverless Cars
- D) Driverless Cars Are Already Here

**40.** On which point may the authors of Passage B and Passage C agree with each other?

- A) No one or nothing could stop the advancements in driverless cars.
- B) Driverless cars can greatly reduce traffic accidents.
- C) Driverless cars should only be tested and used in a designated space.
- D) There is a long way to go before driverless cars replace human drivers.