The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

REGENTS EXAMINATION

IN

ENGLISH LANGUAGE ARTS

Wednesday, August 16, 2017 — 8:30 to 11:30 a.m., only

The possession or use of any communications device is strictly prohibited when taking this examination. If you have or use any communications device, no matter how briefly, your examination will be invalidated and no score will be calculated for you.

A separate answer sheet has been provided for you. Follow the instructions for completing the student information on your answer sheet. You must also fill in the heading on each page of your essay booklet that has a space for it, and write your name at the top of each sheet of scrap paper.

The examination has three parts. For Part 1, you are to read the texts and answer all 24 multiple-choice questions. For Part 2, you are to read the texts and write one source-based argument. For Part 3, you are to read the text and write a text-analysis response. The source-based argument and text-analysis response should be written in pen. Keep in mind that the language and perspectives in a text may reflect the historical and/or cultural context of the time or place in which it was written.

When you have completed the examination, you must sign the statement printed at the bottom of the front of the answer sheet, indicating that you had no unlawful knowledge of the questions or answers prior to the examination and that you have neither given nor received assistance in answering any of the questions during the examination. Your answer sheet cannot be accepted if you fail to sign this declaration.

DO NOT OPEN THIS EXAMINATION BOOKLET UNTIL THE SIGNAL IS GIVEN.

Part 1

Directions (1–24): Closely read each of the three passages below. After each passage, there are several multiple-choice questions. Select the best suggested answer to each question and record your answer on the separate answer sheet provided for you. You may use the margins to take notes as you read.

Reading Comprehension Passage A

In this passage, Dora-Rouge, a Native American Indian elder, is traveling back to her homeland by canoe with a small group of women.

…As we traveled, we entered time and began to trouble it, to pester it apart or into some kind of change. On the short nights we sat by firelight and looked at the moon's long face on water. Dora-Rouge would lie on the beaver blankets and tell us what place we would pass on the next day. She'd look at the stars in the shortening night and say, "the Meeting Place," or "God Island." True to her word, the next day we reached those places. …

Now, looking back, I understand how easily we lost track of things. The time we'd been teasing apart, unraveled. And now it began to unravel us as we entered a kind of timelessness. Wednesday was the last day we called by name, and truly, we no longer needed time. We were lost from it, and lost in this way, I came alive. It was as if I'd slept for years, and was now awake. The others felt it, too. Cell by cell, all of us were taken in by water and by land, swallowed a little at a time. What we'd thought of as our lives and being on earth was gone, and now the world was made up of pathways of its own invention. We were only one of the many dreams of earth. And I knew we were just a small dream.

But there was a place inside the human that spoke with land, that entered dreaming, in the way that people in the north found direction in their dreams. They dreamed charts of land and currents of water. They dreamed where food animals lived. These dreams they called hunger maps and when they followed those maps, they found their prey. It was the language animals and humans had in common. People found their cures in the same way. …

For my own part in this dreaming, as soon as I left time, when Thursday and Friday slipped away, plants began to cross my restless sleep in abundance. A tendril reached through darkness, a first sharp leaf came up from the rich ground of my sleeping, opened upward from the place in my body that knew absolute truth. It wasn't a seed that had been planted there, not a cultivated growing, but a wild one, one that had been there all along, waiting. I saw vines creeping forward. Inside the thin lid of an eye, petals opened, and there was pollen at the center of each flower. Field, forest, swamp. I knew how they breathed at night, and that they were linked to us in that breath. It was the oldest bond of survival. I was devoted to woods the wind walked through, to mosses and lichens. Somewhere in my past, I had lost the knowing of this opening light of life, the taking up of minerals from dark ground, the magnitude of thickets and brush. Now I found it once again. Sleep changed me. I remembered things I'd forgotten, how a hundred years ago, leaves reached toward sunlight, plants bent into currents of water. Something persistent nudged me and it had morning rain on its leaves.

Maybe the roots of dreaming are in the soil of dailiness, or in the heart, or in another place without words, but when they come together and grow, they are like the seeds of hydrogen and the seeds of oxygen that together create ocean, lake, and ice. In this way, the plants and I joined each other. They entangled me in their stems and vines and it was a beautiful entanglement. …

Some mornings as we packed our things, set out across water, the world was the color of copper, a flood of sun arrived from the east, and a thick mist rose up from black earth. Other mornings, heating water over the fire, we'd see the world covered with fog, and the birdsongs sounded forlorn and far away. There were days when we traveled as many as thirty miles. Others we traveled no more than ten. There were times when I resented the work, and days I worked so hard even Agnes' liniment and aspirin would not relax my aching shoulders and I would crave ice, even a single chip of it, cold and shining. On other days I felt a deep contentment as I poled[1] inside shallow currents or glided across a new wide lake.

We were in the hands of nature. In these places things turned about and were other than what they seemed. In silence, I pulled through the water and saw how a river appeared through rolling fog and emptied into the lake. One day, a full-tailed fox moved inside the shadows of trees, then stepped into a cloud. New senses came to me. I was equal to the other animals, hearing as they heard, moving as they moved, seeing as they saw.

One night we stayed on an island close to the decaying, moss-covered pieces of a boat. Its remains looked like the ribs of a large animal. In the morning, sun was a dim light reaching down through the branches of trees. Pollen floated across the dark water and gathered, yellow and life-giving, along the place where water met land. …

One evening it seemed cooler. The air had a different feel, rarefied, clean, and thin. Wolves in the distance were singing and their voices made a sound that seemed to lie upon the land, like a cloud covering the world from one edge of the horizon to the other. We sat around the fire and listened, the light on our faces, our eyes soft. Agnes warmed her hands over the flames.

There was a shorter time of darkness every night, but how beautiful the brief nights, with the stars and the wolves. …

Sometimes I felt there were eyes around us, peering through trees and fog. Maybe it was the eyes of land and creatures regarding us, taking our measure. And listening to the night, I knew there was another horizon, beyond the one we could see. And all of it was storied land, land where deities[2] walked, where people traveled, desiring to be one with infinite space.

We were full and powerful, wearing the face of the world, floating in silence. Dora-Rouge said, "Yes, I believe we've always been lost," as we traveled through thick-grown rushes, marsh, and water so shallow our paddles touched bottom.

The four of us became like one animal. We heard inside each other in a tribal way. I understood this at once and was easy with it. With my grandmothers, there was no such thing as loneliness. Before, my life had been without all its ears, eyes, without all its knowings. Now we, the four of us, all had the same eyes, and when Dora-Rouge pointed a bony finger and said, "This way," we instinctively followed that crooked finger.

I never felt lost. I felt newly found, opening, like the tiny eggs we found in a pond one day, fertile and transparent. I bent over them. The life was already moving inside them, like an eye or heartbeat. One day we passed alongside cliff walls that bore red, ancient drawings of moose and bear. These were said to have been painted not by humans, but by spirits. …

—Linda Hogan
excerpted from "Solar Storms," 1995
Scribner

[1]poled — propelled a boat with a pole

[2]deities — gods

1 In lines 3 through 5, the narrator portrays Dora-Rouge as

(1) compassionate
(2) detached
(3) knowledgeable
(4) misguided

2 In line 13, the narrator compares people's lives to dreams in order to illustrate the idea of

(1) resourcefulness
(2) individuality
(3) vulnerability
(4) insignificance

3 Which phrase from the text best illustrates the meaning of "tendril" as used in line 21?

(1) "I saw vines creeping forward" (line 25)
(2) "there was pollen at the center" (lines 25 and 26)
(3) "Field, forest, swamp" (line 26)
(4) "woods the wind walked through" (line 28)

4 The imagery in lines 25 through 28 can best be described as

(1) amusing
(2) threatening
(3) confusing
(4) enlightening

5 The description in lines 48 through 52 creates a sense of

(1) transformation
(2) isolation
(3) division
(4) vindication

6 The phrase, "We were full and powerful, wearing the face of the world," (line 69) suggests that the group

(1) believed they were something they were not
(2) developed a kinship with the environment
(3) became outwardly proud and aggressive
(4) adopted a casual attitude toward nature

7 The language use in lines 77 through 81 serves to

(1) link the past with the future
(2) continue an ongoing struggle
(3) present a cultural dilemma
(4) clarify the need for cooperation

8 The passage is primarily developed through the use of

(1) rhetorical questions
(2) comparison and contrast
(3) parallel structure
(4) personal narrative

9 The passage as a whole supports the theme that with

(1) approval of society comes cultural freedom
(2) clarity of mind comes connection of spirit
(3) support of others comes environmental change
(4) passage of time comes acceptance of nature

10 Which quotation best supports a central idea of the passage?

(1) "Maybe the roots of dreaming are in the soil of dailiness" (line 34)
(2) "On other days I felt a deep contentment as I poled inside shallow currents or glided across a new wide lake" (lines 45 through 47)
(3) "The air had a different feel, rarefied, clean, and thin" (line 57)
(4) "And listening to the night, I knew there was another horizon, beyond the one we could see" (lines 65 and 66)

Reading Comprehension Passage B

I Am Vertical

But I would rather be horizontal.
I am not a tree with my root in the soil
Sucking up minerals and motherly love
So that each March I may gleam into leaf,
Nor am I the beauty of a garden bed
Attracting my share of Ahs and spectacularly painted,
Unknowing I must soon unpetal.
Compared with me, a tree is immortal
And a flower-head not tall, but more startling,
And I want the one's longevity and the other's daring.

Tonight, in the infinitesimal[1] light of the stars,
The trees and flowers have been strewing their cool odors.
I walk among them, but none of them are noticing.
Sometimes I think that when I am sleeping
I must most perfectly resemble them—
Thoughts gone dim.
It is more natural to me, lying down.
Then the sky and I are in open conversation,
And I shall be useful when I lie down finally:
Then the trees may touch me for once, and the flowers
have time for me.

—Sylvia Plath
from *Uncollected Poems*, 1965
Turret Books

[1] infinitesimal — very small

11 The word "unpetal" in line 7 suggests

(1) inspiration
(2) invisibility
(3) isolation
(4) impermanence

12 Lines 11 through 13 reveal the narrator's awareness of

(1) the limited time people exist on earth
(2) the unexpected changes that affect one's life
(3) her anxiety over the shifting of seasons
(4) her insignificance in the eyes of nature

13 In lines 14 through 16, the narrator suggests that

(1) consciousness is a barrier to connecting with nature
(2) nature's ability to impress surpasses human's imagination
(3) the future depends on natural forces beyond human control
(4) nature's cruelty causes one to feel helpless

14 Throughout the poem, the tone can best be described as

(1) envious
(2) skeptical
(3) hostile
(4) indignant

Reading Comprehension Passage C

Jian Lin was 14 years old in 1973, when the Chinese government under Mao Zedong recruited him for a student science team called "the earthquake watchers." After a series of earthquakes that had killed thousands in northern China, the country's seismologists[1] thought that if they augmented[2] their own research by having observers keep an eye out for anomalies like snakes bolting early from their winter dens and erratic[3] well-water levels, they might be able to do what no scientific body had managed before: issue an earthquake warning that would save thousands of lives.

In the winter of 1974, the earthquake watchers were picking up some suspicious signals near the city of Haicheng. Panicked chickens were squalling and trying to escape their pens; water levels were falling in wells. Seismologists had also begun noticing a telltale pattern of small quakes. "They were like popcorn kernels," Lin tells me, "popping up all over the general area." Then, suddenly, the popping stopped, just as it had before a catastrophic earthquake in 1966 that killed more than 8,000. "Like 'the calm before the storm,' " Lin says. "We have that exact same phrase in Chinese." On the morning of February 4, 1975, the seismology bureau issued a warning: Haicheng should expect a big earthquake, and people should move outdoors.

At 7:36 p.m., a magnitude 7.0 quake struck. The city was nearly leveled, but only about 2,000 people were killed. Without the warning, easily 150,000 would have died. "And so you finally had an earthquake forecast that did indeed save lives," Lin recalls. "People were excited. Or, you could say, uplifted. *Uplifted* is a great word for it." But uplift turned to heartbreak the very next year, when a 7.5 quake shattered the city of Tangshan without so much as a magnitude 4 to introduce it. When the quake hit the city of 1.6 million at 3:42 a.m., it killed nearly 250,000 people, most of whom were asleep. "If there was any moment in my life when I was scared of earthquakes, that was it," Lin says. "You think, what if it happened to you? And it could. I decided that if I could do anything—*anything*—to save lives lost to earthquakes, it would be worth the effort."

Lin is now a senior scientist of geophysics at Woods Hole Oceanographic Institution, in Massachusetts, where he spends his time studying not the scurrying of small animals and fluctuating electrical current between trees (another fabled warning sign), but seismometer readings, GPS coordinates, and global earthquake-notification reports. He and his longtime collaborator, Ross Stein of the U.S. Geological Survey, are champions of a theory that could enable scientists to forecast earthquakes with more precision and speed.

Some established geophysicists[4] insist that all earthquakes are random, yet everyone agrees that aftershocks are not. Instead, they follow certain empirical laws. Stein, Lin, and their collaborators hypothesized that many earthquakes classified as main shocks are actually aftershocks, and they went looking for the forces that cause faults to fail.

Their work was in some ways heretical[5]: For a long time, earthquakes were thought to release only the stress immediately around them; an earthquake that happened in one place would decrease the possibility of another happening nearby. But that didn't explain earthquake sequences like the one that rumbled through the desert and mountains east of Los Angeles in 1992. The series began on April 23 with a 6.2 near the town of Joshua Tree; two months later, on June 28, a 7.3 struck less than 15 miles away in the desert town of Landers. Three and a half hours after that, a 6.5 hit the town of Big Bear, in the mountains

[1]seismologists — people who study earthquakes

[2]augmented — added to

[3]erratic — unpredictable

[4]geophysicists — people who study the physics of the earth and its environment, including seismology

[5]heretical — against the opinion of authorities

overlooking the Mojave. The Big Bear quake was timed like an aftershock, except it was too far off the Landers earthquake's fault rupture. When Lin, Stein, and Geoffrey King of the Paris Geophysical Institute got together to analyze it, they decided to ignore the distance rule and treat it just as a different kind of aftershock. Their ensuing report, "Static Stress Changes and the Triggering of Earthquakes," became one of the decade's most-cited earthquake research papers.

Rocks can be subject to two kinds of stresses: the "clamping" stress that pushes them together, and the "shear" stress they undergo as they slide past each other. Together, these stresses are known as Coulomb stress, named for Charles-Augustin de Coulomb, an 18th-century French physicist. Coulomb calculations had been used for years in engineering, to find the failure points of various building materials, but they'd never been applied properly to faults. It turned out, though, that faults in the ground behave much like rocks in the laboratory: they come unglued when shear stress exceeds the friction and pressure (the clamping stress) holding them together. When Stein, Lin, and King applied the Coulomb model to the California sequence, they found that most of the earthquakes had occurred in areas where the shifting of the ground had caused increased stress.

In 1997, Stein and two other geologists using the model found that there was a 12 percent chance that a magnitude 7 or greater would hit near Izmit, Turkey, within 30 years; two years later, on August 17, 1999, a magnitude 7.4 destroyed the city, which wasn't designed to withstand such a tremor. A Turkish geologist named Aykut Barka quickly wrote up a paper warning that Coulomb stress from the Izmit quake could trigger a similar rupture near Düzce, a town roughly 60 miles east. His work persuaded authorities there to close school buildings damaged during the Izmit shaking. On November 12, a segment of the North Anatolian Fault gave way, in a magnitude 7.2. The empty school buildings collapsed.

Lin and Stein both admit that Coulomb stress doesn't explain all earthquakes. Indeed, some geophysicists, like Karen Felzer, of the U.S. Geological Survey, think their hypothesis gives short shrift[6] to the impact that dynamic stress—the actual rattling of a quake in motion—has on neighboring faults.

In the aftermath of the disastrous March 11 Tōhoku quake, both camps are looking at its well-monitored aftershocks (including several within 100 miles of Tokyo) for answers. Intriguingly, it was *preceded* by a flurry of earthquakes, one as large as magnitude 7.2, that may have been foreshocks, although no one thought so at the time; the researchers are trying to determine what those early quakes meant.

When I ask Lin whether California, where I live, is next, he laughs. "I understand that the public now thinks that we've entered a global earthquake cluster. Even my own mother in China thinks that. But there's no scientific evidence whatsoever to suggest that the earthquake in New Zealand triggered the earthquake in Japan, or Japan will trigger one in California." Still, Lin and his colleagues do wonder whether Tōhoku has pushed neighboring faults closer to rupture. "I am particularly interested in how this earthquake might have changed the potential of future earthquakes to the south, even closer to Tokyo," Lin tells me. "There, even a much smaller earthquake could be devastating."

—Judith Lewis Mernit
"Is San Francisco Next?"
The Atlantic, June 2011

[6]short shrift — little consideration

15 As used in line 5, the word "anomalies" most nearly means

(1) seasonal changes
(2) odd occurrences
(3) dangerous incidents
(4) scheduled events

16 The first paragraph contributes to a central idea in the text by

(1) contributing historical facts
(2) contrasting early theories
(3) comparing two philosophies
(4) challenging cultural beliefs

17 The figurative language in lines 11 and 12 conveys a sense of

(1) disbelief
(2) apathy
(3) disappointment
(4) urgency

18 The contrast drawn between the Haicheng and Tangshan earthquakes (lines 8 through 26) contributes to a central idea that earthquakes are

(1) preceded by reliable signs
(2) controlled by observable factors
(3) not always predictable
(4) not often studied

19 The purpose of lines 27 through 30 is to emphasize that Jian Lin

(1) relied on his past experience to identify earthquakes
(2) modified his methods of observing earthquakes
(3) changed his understanding about the causes of earthquakes
(4) disagreed with his co-researcher on the measurement of earthquakes

20 The word "champions" as used in line 31 most nearly means

(1) advisers
(2) supporters
(3) adaptors
(4) survivors

21 Which statement reflects a long-held belief disproved by Lin, Stein, and King?

(1) "many earthquakes classified as main shocks are actually aftershocks" (lines 35 and 36)
(2) "an earthquake that happened in one place would decrease the possibility of another happening nearby" (lines 38 and 39)
(3) "Rocks can be subject to two kinds of stresses" (line 50)
(4) "faults in the ground behave much like rocks in the laboratory" (lines 55 and 56)

22 According to lines 50 through 59, seismologists realized that the California sequence of earthquakes happened because

(1) shear stress forced rocks to fuse together
(2) clamping stress caused rocks to move apart
(3) shear stress was greater than clamping stress
(4) clamping stress balanced the shear stress

23 Throughout the text, the author portrays Jian Lin as

(1) satisfied
(2) superstitious
(3) cautious
(4) dedicated

24 Jian Lin's research regarding earthquakes can best be described as

(1) flawed by inconsistent methodology
(2) concurrent with prior theories
(3) challenged by conflicting findings
(4) important to future studies

Part 2

Argument

Directions: Closely read each of the ***four*** texts provided on pages 10 through 16 and write a source-based argument on the topic below. You may use the margins to take notes as you read and scrap paper to plan your response. Write your argument beginning on page 1 of your essay booklet.

Topic: Should self-driving cars replace human drivers?

Your Task: Carefully read each of the ***four*** texts provided. Then, using evidence from at least ***three*** of the texts, write a well-developed argument regarding whether or not self-driving cars should replace human drivers. Clearly establish your claim, distinguish your claim from alternate or opposing claims, and use specific, relevant, and sufficient evidence from at least ***three*** of the texts to develop your argument. Do *not* simply summarize each text.

Guidelines:

Be sure to:

- Establish your claim regarding whether or not self-driving cars should replace human drivers
- Distinguish your claim from alternate or opposing claims
- Use specific, relevant, and sufficient evidence from at least ***three*** of the texts to develop your argument
- Identify each source that you reference by text number and line number(s) or graphic (for example: Text 1, line 4 or Text 2, graphic)
- Organize your ideas in a cohesive and coherent manner
- Maintain a formal style of writing
- Follow the conventions of standard written English

Texts:

Text 1 – How Google's Self-Driving Car Will Change Everything
Text 2 – Google's Driverless Cars Run Into Problem: Cars With Drivers
Text 3 – Autonomous Vehicles Will Replace Taxi Drivers, But That's Just the Beginning
Text 4 – Along for the Ride

Text 1

How Google's Self-Driving Car Will Change Everything

Imagine getting in your car, typing or speaking a location into your vehicle's interface, then letting it drive you to your destination while you read a book, surf the web or nap. Self-driving vehicles — the stuff of science fiction since the first roads were paved — are coming, and they're going to radically change what it's like to get from point A to point B.

Basic Technology Already In Use

…The first big leap to fully autonomous[1] vehicles is due in 2017, when Google Inc. (GOOG) said it would have an integrated system ready to market. Every major automotive manufacturer is likely to follow by the early 2020s, though their systems could wind up being more sensor-based, and rely less on networking and access to map information. Google probably wont [*sic*] manufacture cars. More likely, it'll license the software and systems.

A Drastic Change

As with the adoption of any new revolutionary technology, there will be problems for businesses that don't adjust fast enough. Futurists estimate that hundreds of billions of dollars (if not trillions) will be lost by automakers, suppliers, dealers, insurers, parking companies, and many other car-related enterprises. And think of the lost revenue for governments via licensing fees, taxes and tolls, and by personal injury lawyers and health insurers.

Who needs a car made with heavier-gauge steel and eight airbags (not to mention a body shop) if accidents are so rare? Who needs a parking spot close to work if your car can drive you there, park itself miles away, only to pick you up later? Who needs to buy a flight from Boston to Cleveland when you can leave in the evening, sleep much of the way, and arrive in the morning?

Indeed, Google's goal is to increase car utilization from 5-10% to 75% or more by facilitating sharing. That means fewer cars on the road. Fewer cars period, in fact. Who needs to own a car when you can just order a shared one and it'll drive up minutes later, ready to take you wherever you want? …

Changing Oil Demand

If you're in the business of finding, extracting, refining and marketing hydrocarbons,[2] such as Exxon Mobil Corp. (EOX), Chevron Corp. (CVX) or BP plc (BP), you could see your business fluctuate as use changes.

"These vehicles should practice very efficient eco-driving practices, which is typically about 20% better than the average driver," said [Robin] *Chase*[3] [*sic*] "On the other hand, if these cars are owned by individuals, I see a huge rise in the number of trips, and vehicle miles traveled. People will send out their car to run errands they would never do if they had to be in the car and waste their own time. If the autonomous cars are shared vehicles and people pay for each trip, I think this will reduce demand, and thus (vehicle miles traveled)."

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[1]autonomous — self–directed

[2]hydrocarbons — organic compounds that are chief components of petroleum and natural gas

[3]Robin Chase — founder and CEO of Buzzcar

Safety Dividend

…"Over 90% of accidents today are caused by driver error," said Professor Robert W. Peterson of the Center for Insurance Law and Regulation at Santa Clara University School of Law. "There is every reason to believe that self-driving cars will reduce frequency and severity of accidents, so insurance costs should fall, perhaps dramatically."

"Cars can still get flooded, damaged or stolen," notes Michael Barry, the v.p. [vice president] of media relations at the Insurance Information Institute. "But this technology will have a dramatic impact on underwriting.[4] A lot of traditional underwriting criteria will be upended."

Barry said it's too early to quantify exactly how self-driving vehicles will affect rates, but added that injured parties in a crash involving a self-driving car may choose to sue the vehicle's manufacturer, or the software company that designed the autonomous capability. …

Risks, Hurdles and the Unknown

There are regulatory and legislative obstacles to widespread use of self-driving cars, and substantial concerns about privacy (who will have access to any driving information these vehicles store?). There's also the question of security, as hackers could theoretically take control of these vehicles, and are not known for their restraint or civic-mindedness.

The Bottom Line

However it plays out, these vehicles are coming — and fast. Their full adoption will take decades, but their convenience, cost, safety and other factors will make them ubiquitous[5] and indispensable. Such as with any technological revolution, the companies that plan ahead, adjust the fastest and imagine the biggest will survive and thrive. And companies invested in old technology and practices will need to evolve or risk dying.

—Joseph A. Dallegro
excerpted and adapted from "How Google's Self-Driving Car Will Change Everything"
www.investopedia.com, 2015

[4]underwriting — risk determination

[5]ubiquitous — everywhere

Text 2

Google's Driverless Cars Run Into Problem: Cars With Drivers

Google, a leader in efforts to create driverless cars, has run into an odd safety conundrum:[1] humans.

Last month, as one of Google's self-driving cars approached a crosswalk, it did what it was supposed to do when it slowed to allow a pedestrian to cross, prompting its "safety driver" to apply the brakes. The pedestrian was fine, but not so much Google's car, which was hit from behind by a human-driven sedan.

Google's fleet of autonomous test cars is programmed to follow the letter of the law. But it can be tough to get around if you are a stickler for the rules. One Google car, in a test in 2009, couldn't get through a four-way stop because its sensors kept waiting for other (human) drivers to stop completely and let it go. The human drivers kept inching forward, looking for the advantage — paralyzing Google's robot.

It is not just a Google issue. Researchers in the fledgling[2] field of autonomous vehicles say that one of the biggest challenges facing automated cars is blending them into a world in which humans don't behave by the book. "The real problem is that the car is too safe," said Donald Norman, director of the Design Lab at the University of California, San Diego, who studies autonomous vehicles. …

Traffic wrecks and deaths could well plummet in a world without any drivers, as some researchers predict. But wide use of self-driving cars is still many years away, and testers are still sorting out hypothetical risks — like hackers — and real world challenges, like what happens when an autonomous car breaks down on the highway.

For now, there is the nearer-term problem of blending robots and humans. Already, cars from several automakers have technology that can warn or even take over for a driver, whether through advanced cruise control or brakes that apply themselves. Uber is working on the self-driving car technology, and Google expanded its tests in July to Austin, Tex[as].

Google cars regularly take quick, evasive maneuvers or exercise caution in ways that are at once the most cautious approach, but also out of step with the other vehicles on the road. …

Since 2009, Google cars have been in 16 crashes, mostly fender-benders, and in every single case, the company says, a human was at fault. This includes the rear-ender crash on Aug. 20, and reported Tuesday by Google. The Google car slowed for a pedestrian, then the Google employee manually applied the brakes. The car was hit from behind, sending the employee to the emergency room for mild whiplash.

Google's report on the incident adds another twist: While the safety driver did the right thing by applying the brakes, if the autonomous car had been left alone, it might have braked less hard and traveled closer to the crosswalk, giving the car behind a little more room to stop. Would that have prevented the collision? Google says it's impossible to say.

There was a single case in which Google says the company was responsible for a crash. It happened in August 2011, when one of its Google cars collided with another moving vehicle. But, remarkably, the Google car was being piloted at the time by an employee. Another human at fault. …

On a recent outing with New York Times journalists, the Google driverless car took two evasive maneuvers that simultaneously displayed how the car errs on the cautious side, but also how jarring that experience can be. In one maneuver, it swerved sharply in a residential

[1]conundrum — difficult problem

[2]fledgling — new and inexperienced

neighborhood to avoid a car that was poorly parked, so much so that the Google sensors couldn't tell if it might pull into traffic.

More jarring for human passengers was a maneuver that the Google car took as it approached a red light in moderate traffic. The laser system mounted on top of the driverless car sensed that a vehicle coming the other direction was approaching the red light at higher-than-safe speeds. The Google car immediately jerked to the right in case it had to avoid a collision. In the end, the oncoming car was just doing what human drivers so often do: not approach a red light cautiously enough, though the driver did stop well in time.

Courtney Hohne, a spokeswoman for the Google project, said current testing was devoted to "smoothing out" the relationship between the car's software and humans. For instance, at four-way stops, the program lets the car inch forward, as the rest of us might, asserting its turn while looking for signs that it is being allowed to go.

The way humans often deal with these situations is that "they make eye contact. On the fly, they make agreements about who has the right of way," said John Lee, a professor of industrial and systems engineering and expert in driver safety and automation at the University of Wisconsin.

"Where are the eyes in an autonomous vehicle?" he added. …

—Matt Richtel and Conor Dougherty
excerpted and adapted from
"Google's Driverless Cars Run Into Problem: Cars With Drivers"
www.nytimes.com, Sept. 1, 2015

Text 3

Autonomous Vehicles Will Replace Taxi Drivers, But That's Just the Beginning

…According to the Bureau of Labor Statistics [BLS] there are about 178,000 people employed as taxi drivers or chauffeurs in the United States. But once driverless technology advances to the point that vehicles can be fully autonomous — without the need for any human behind the wheel in case of emergencies — professional drivers will become a thing of the past. Bus drivers, whether they're for schools, cities, or long-distance travel, would be made obsolete. Once cars drive themselves, food deliveries will be a matter of restaurants filling a car with orders and sending it off, eliminating the need for a delivery driver. Each of these professions employ more people and are better paid than taxi drivers, as shown in the table below.

Occupation	Average annual wage	Number of jobs	Total annual wages
Taxi drivers & chauffeurs	$25,690	178,260	$4,579,499,400
Bus drivers – transit & intercity	$39,410	158,050	$6,228,750,500
Driver / sales workers (delivering food, newspapers)	$27,720	405,810	$11,249,053,200
Bus drivers – school or special client	$29,910	499,440	$14,938,250,400
Postal service mail carriers	$51,790	307,490	$15,924,907,100
Light truck or delivery services drivers (UPS, FedEx)	$33,870	797,010	$26,994,728,700
Heavy and tractor-trailer truck drivers	$41,930	1,625,290	$68,148,409,700
TOTAL	**$35,760.00**	**3,971,350**	**$148,063,599,000.00**

Source: Bureau of Labor Statistics

Some of these may be a bit surprising, like postal carriers. But once fully autonomous vehicles are commonplace it would make sense for the Postal Service to make use of the technology to deliver mail, especially in areas where curbside mailboxes are standard and it would be rather simple for a mechanical arm to deposit and retrieve mail directly. Drivers of delivery trucks for companies like UPS and FedEx may also face extinction, if they're not replaced by Amazon's delivery drones first — or perhaps they'll develop a combined system where self-driving trucks bring packages from the warehouse to their destination, and a drone delivers them the last few yards from curbside to doorstep.

Despite their importance for the economy, each of these professions pale [*sic*] in comparison to heavy and tractor-trailer truck drivers. This field employs the most by far — nine times as many people work as truckers than as taxi drivers, and it's the most common job in a whopping 29 states — and is also better paid than most, with an average salary of about $42,000. When considering the total amount of wages paid to each of the seven occupations in the table above, truck drivers make up nearly half, while taxi drivers & chauffeurs only account for 3%. The development of self-driving tractor-trailers won't be far behind automated taxi cabs, with companies like Daimler already testing out partially-automated trucks in Nevada.

While there may be other driving-focused jobs not included in these BLS statistics, there are certainly many more industries that will be impacted by the replacement of humans with self-driving vehicles. If this technology leads to a sharp decline in car ownership like many predict, insurance companies will have far fewer customers and may not need as many employees to service them. The same goes for mechanics and auto part manufacturers, who could face a massive drop in demand. Fewer human truckers on the road means fewer motel stays and rest stop visits, and cheaper trucking could take business away from freight trains or even oil pipelines. Vehicles programmed to obey traffic laws won't need nearly as much policing, which also means fewer traffic tickets and less revenue for municipalities. The full scale of these economic shifts will be impossible to understand until they're upon us, but the one thing we can know for sure is that they'll touch almost every aspect of society. …

—Sam Tracy
excerpted and adapted from "Autonomous Vehicles Will Replace Taxi Drivers, But That's Just the Beginning"
www.huffingtonpost.com, June 11, 2015

Text 4

Along for the Ride

…Automotive designers have a good incentive to get human drivers out from behind the wheel: public safety. In 2012, according to the most recent figures from the National Highway Traffic Safety Administration (NHTSA), 33,561 people were killed in car crashes in the United States, and an estimated 2.36 million were injured. According to NHTSA, a number of major crash studies have found that human error caused more than 90 percent of those crashes. In a perfect world, technology would take driver error out of the equation. …

But before society can reap those benefits, experts caution there are important problems to solve. Namely, since people interact with technology in unexpected ways, how will each individual driver engage with an automated car?

For some people, automation might lead to complacency,[1] says Nicholas Ward, PhD, a human factors psychologist in the department of mechanical and industrial engineering at Montana State University. Drivers who put too much trust in automation may become overly reliant on it, overestimating what the system can do for them. …

Information overload may be another concern, says Neville Stanton, PhD, a psychologist at the University of Southampton in the United Kingdom, who studies human performance in technological systems. While automated systems are designed to take pressures off the driver, he's found that they may add complexity in some cases. In an automated system, drivers may feel compelled to monitor the behavior of the system as well as keep an eye on the driving environment. That extra pressure might increase stress and error. …

Given a nearly infinite combination of driver personalities, road conditions and vehicle technologies, the answer is anything but straightforward. In a study using a driving simulator, for example, Stanton found that adaptive cruise control — in which a car maintains a safe following distance from the vehicle ahead of it — can reduce a driver's mental workload and stress levels. However, that technology also caused a reduction in drivers' situational awareness. And while a lower mental workload may be a good thing in tricky traffic jams, it could cause problems if drivers totally tune out.

Indeed, driver disengagement is a serious concern for automated-car designers. Users in such vehicles are expected to tune out. After all, the appeal of such cars is that they can transport us to and fro without our having to do the hard work. But that presents a problem for our busy brains. …

Detached from the activity of driving, most people soon begin to experience "passive fatigue," says Gerald Matthews, PhD, a psychologist at the Applied Cognition and Training in Immersive Virtual Environments Lab at the University of Central Florida. That cognitive muddling can be a big problem, Matthews says, if the driver has to take back control of the vehicle (when leaving a highway "platoon" of automated cars to re-enter city streets, for instance — or, in a worst-case scenario, if automated systems fail). …

Like it or not, though, carmakers are pressing forward with automated systems, and psychologists can play a role in making them as safe as possible. One important issue, says Pradhan,[2] is how drivers of different ages, personalities, experience levels and cognitive abilities will deal with such systems. "There is no average driver. The field is so new, we're still asking a lot of fundamental questions — and there are very few people looking at driver characteristics," he says. "Automation has to be designed for everybody." …

—Kirsten Weir
excerpted from "Along for the Ride"
www.apa.org, January 2015

[1] complacency — a feeling of security, often while unaware of potential dangers

[2] Anuj K. Pradhan, PhD — a research scientist who studies driver behavior and injury prevention at the University of Michigan Transportation Research Institute

Part 3

Text-Analysis Response

Your Task: Closely read the text provided on pages 18 and 19 and write a well-developed, text-based response of two to three paragraphs. In your response, identify a central idea in the text and analyze how the author's use of ***one*** writing strategy (literary element or literary technique or rhetorical device) develops this central idea. Use strong and thorough evidence from the text to support your analysis. Do *not* simply summarize the text. You may use the margins to take notes as you read and scrap paper to plan your response. Write your response in the spaces provided on pages 7 through 9 of your essay booklet.

Guidelines:

Be sure to:

- Identify a central idea in the text
- Analyze how the author's use of ***one*** writing strategy (literary element or literary technique or rhetorical device) develops this central idea. Examples include: characterization, conflict, denotation/connotation, metaphor, simile, irony, language use, point-of-view, setting, structure, symbolism, theme, tone, etc.
- Use strong and thorough evidence from the text to support your analysis
- Organize your ideas in a cohesive and coherent manner
- Maintain a formal style of writing
- Follow the conventions of standard written English

Text

The following excerpt is taken from a novel set in France during the World War II era.

Sixteen paces to the water fountain, sixteen back. Forty-two to the stairwell, forty-two back. Marie-Laure draws maps in her head, unreels a hundred yards of imaginary twine, and then turns and reels it back in. Botany smells like glue and blotter paper and pressed flowers. Paleontology smells like rock dust, bone dust. Biology smells like formalin and old fruit; it is loaded with heavy cool jars in which float things she has only had described for her: the pale coiled ropes of rattlesnakes, the severed hands of gorillas. Entomology smells like mothballs and oil: a preservative that, Dr. Geffard explains, is called naphthalene. Offices smell of carbon paper, or cigar smoke, or brandy, or perfume. Or all four.

She follows cables and pipes, railings and ropes, hedges and sidewalks. She startles people. She never knows if the lights are on.

The children she meets brim with questions: Does it hurt? Do you shut your eyes to sleep? How do you know what time it is?

It doesn't hurt, she explains. And there is no darkness, not the kind they imagine. Everything is composed of webs and lattices and upheavals of sound and texture. She walks a circle around the Grand Gallery, navigating between squeaking floorboards; she hears feet tramp up and down museum staircases, a toddler squeal, the groan of a weary grandmother lowering herself onto a bench.

Color—that's another thing people don't expect. In her imagination, in her dreams, everything has color. The museum buildings are beige, chestnut, hazel. Its scientists are lilac and lemon yellow and fox brown. Piano chords loll in the speaker of the wireless in the guard station, projecting rich blacks and complicated blues down the hall toward the key pound.[1] Church bells send arcs of bronze careening off the windows. Bees are silver; pigeons are ginger and auburn and occasionally golden. The huge cypress trees she and her father pass on their morning walk are shimmering kaleidoscopes, each needle a polygon of light.

She has no memories of her mother but imagines her as white, a soundless brilliance. Her father radiates a thousand colors, opal, strawberry red, deep russet, wild green; a smell like oil and metal, the feel of a lock tumbler sliding home, the sound of his key rings chiming as he walks. He is an olive green when he talks to a department head, an escalating series of oranges when he speaks to Mademoiselle Fleury from the greenhouses, a bright red when he tries to cook. He glows sapphire when he sits over his workbench in the evenings, humming almost inaudibly as he works, the tip of his cigarette gleaming a prismatic blue.

She gets lost. Secretaries or botanists, and once the director's assistant, bring her back to the key pound. She is curious; she wants to know the difference between an alga and a lichen, a *Diplodon charruanus* and a *Diplodon delodontus*. Famous men take her by the elbow and escort her through the gardens or guide her up stairwells. "I have a daughter too," they'll say. Or "I found her among the hummingbirds."

"*Toutes mes excuses*,"[2] her father says. He lights a cigarette; he plucks key after key out of her pockets. "What," he whispers, "am I going to do with you?"

On her ninth birthday, when she wakes, she finds two gifts. The first is a wooden box with no opening she can detect. She turns it this way and that. It takes her a little while to realize one side is spring-loaded; she presses it and the box flips open. Inside waits a single cube of creamy Camembert that she pops directly into in [*sic*] her mouth.

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[1] key pound — the office of her father, the museum locksmith

[2] toutes mes excuses — my apologies

"Too easy!" her father says, laughing.

The second gift is heavy, wrapped in paper and twine. Inside is a massive spiral-bound book. In Braille.

"They said it's for boys. Or very adventurous girls." She can hear him smiling.

She slides her fingertips across the embossed[3] title page. *Around. The. World. In. Eighty. Days*. "Papa, it's too expensive."

"That's for me to worry about."

That morning Marie-Laure crawls beneath the counter of the key pound and lies on her stomach and sets all ten fingertips in a line on a page. The French feels old-fashioned, the dots printed much closer together than she is used to. But after a week, it becomes easy. She finds the ribbon she uses as a bookmark, opens the book, and the museum falls away.

Mysterious Mr. Fogg lives his life like a machine. Jean Passepartout becomes his obedient valet. When, after two months, she reaches the novel's last line, she flips back to the first page and starts again. At night she runs her fingertips over her father's model: the bell tower, the display windows. She imagines Jules Verne's characters walking along the streets, chatting in shops; a half-inch-tall baker slides speck-sized loaves in and out of his ovens; three minuscule burglars hatch plans as they drive slowly past the jeweler's; little grumbling cars throng the rue[4] de Mirbel, wipers sliding back and forth. Behind a fourth-floor window on the rue des Patriarches, a miniature version of her father sits at a miniature workbench in their miniature apartment, just as he does in real life, sanding away at some infinitesimal[5] piece of wood; across the room is a miniature girl, skinny, quick-witted, an open book in her lap; inside her chest pulses something huge, something full of longing, something unafraid.

—Anthony Doerr
excerpted from *All the Light We Cannot See,* 2014
Scribner

[3]embossed — a stamped, molded or carved design

[4]rue — street

[5]infinitesimal — very small

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