The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

REGENTS EXAMINATION

IN

(Common Core)

Tuesday, January 26, 2016 — 1:15 to 4:15 p.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

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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

The factory made the best centrifugal pumps in the world, and Merle Waggoner owned it. He'd started it. He'd just been offered two million dollars for it by the General Forge and Foundry Company. He didn't have any stockholders and he didn't owe a dime. He was fifty-one, a widower, and he had one heir—a son. The boy's name was Franklin. The boy was named after Benjamin Franklin.

One Friday afternoon father and son came out of Merle's office and into the factory. They went down a factory aisle to Rudy Linberg's lathe. 1

"Rudy," said Merle, "the boy here's home from college for three days, and I thought maybe you and him and your boy and me might go out to the farm and shoot some clay pigeons tomorrow."

Rudy turned his sky-blue eyes to Merle and young Franklin. He was Merle's age, and he had the deep and narrow dignity of a man who had learned his limitations early—who had never tried to go beyond them. His limitations were those of his tools, his flute and his shotgun. ...

"Let's go ask my boy what he's got on tomorrow," said Rudy. It was a formality. Karl always did what his father wanted him to do—did it with profound love. ...

Karl was a carbon copy of his father. He was such a good mimic of Rudy that his joints seemed to ache a little with age. He seemed sobered by fifty-one years of life, though he'd lived only twenty. He seemed instinctively wary of safety hazards that had been eliminated from the factory by the time he'd learned to walk. Karl stood at attention without humility, just as his father had done.

"Want to go shooting tomorrow?" said Rudy.

"Shoot what?" said Karl.

"Crows. Clay pigeons," said Rudy. "Maybe a woodchuck."

"Don't mind," said Karl. He nodded briefly to Merle and Franklin. "Glad to." ...

Rudy nodded. He examined the work in Karl's lathe and tapped his own temple. The tapping was a signal that Franklin had seen many times on hunts. It meant that Karl was doing fine.

Rudy touched Karl's elbow lightly. It was the signal for Karl to get back to work. Rudy and Karl each held up a crooked finger and saluted with it. Franklin knew what that meant too. It meant, "Good-by, I love you." ...

Merle was sitting at his desk, his head down, when Franklin came in. He held a steel plate about six inches square in his left hand. In the middle of the plate was a hole two inches square. In his right hand he held a steel cube that fitted the hole exactly. ...

Franklin sat down gingerly on a hard chair by the wall. The office hadn't changed much in the years he'd known it. It was one more factory room, with naked pipes overhead—the cold ones sweaty, the hot ones dry. Wires snaked from steel box to steel box. The green walls and cream trim were as rough as elephant hide in some places, with alternating coats of paint and grime, paint and grime.

 $^{^{1}}$ lathe — a machine on which a piece of material, such as wood or metal, is spun and shaped against a fixed cutting tool

There had never been time to scrape away the layers, and barely enough time, overnight, to slap on new paint. And there had never been time in which to finish the rough shelves that lined the room. ...

Merle slipped the cube through the square hole once more. "Know what these are?" he said.

"Yes, sir," said Franklin. "They're what Rudy Linberg had to make when he was an apprentice in Sweden."

The cube could be slipped through the hole in twenty-four different ways, without letting the tiniest ray of light pass through with it.

"Unbelievable skill," said Franklin respectfully. "There aren't craftsmen like that coming along any more." He didn't really feel much respect. He was simply saying what he knew his father wanted to hear. The cube and the hole struck him as criminal wastes of time and great bores. "Unbelievable," he said again.

"It's utterly unbelievable, when you realize that Rudy didn't make them," said Merle gravely, "when you realize what generation the man who made them belongs to."

"Oh?" said Franklin. "Who did make them?"

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"Rudy's boy, Karl," said Merle. "A member of your generation." He ground out his cigar sadly. "He gave them to me on my last birthday. They were on my desk, boy, waiting for me when I came in—right beside the ones Rudy gave me thirty-one years before." ...

"I could have cried, boy, when I saw those two plates and those two cubes side by side," said Merle. "Can you understand that?" he asked beseechingly. "Can you understand why I'd feel like crying?" ...

"The cube of Karl's fitted through the hole of Rudy's!" said Merle. "They were interchangeable!"

"Gosh!" said Franklin. "I'll be darned. Really?"

And now he felt like crying, because he didn't care, couldn't care—and would have given his right arm to care. The factory whanged and banged and screeched in monstrous irrelevance—Franklin's, all Franklin's, if he just said the word.

"What'll you do with it—buy a theater in New York?" said Merle abruptly.

"Do with what, sir?" said Franklin.

"The money I'll get for the factory when I sell it—the money I'll leave to you when I'm dead," said Merle. He hit the word "dead" hard. "What's Waggoner Pump going to be converted into? Waggoner Theaters? Waggoner School of Acting? The Waggoner Home for Broken-Down Actors?"

"I—I hadn't thought about it," said Franklin. The idea of converting Waggoner Pump into something equally complicated hadn't occurred to him, and appalled him now. He was being asked to match his father's passion for the factory with an equal passion for something else. And Franklin had no such passion—for the theater or anything else. ...

"Don't sell on my account," said Franklin wretchedly.

"On whose account would I keep it?" said Merle.

"Do you have to sell it today?" said Franklin, horrified.

"Strike while the iron's hot, I always say," said Merle. "Today's the day you decided to be an actor, and, as luck would have it, we have an excellent offer for what I did with my life."

"Couldn't we wait?"

"For what?" said Merle. He was having a good time now.

"Father!" cried Franklin. "For the love of heaven, father, please!" He hung his head and shook it. "I don't know what I'm doing," he said brokenly. "I don't know for sure what I want to do yet. I'm just playing with ideas, trying to find myself. Please, father, don't sell what

you've done with your life, don't just throw it away because I'm not sure I want to do that with my life too! Please!" Franklin looked up. "I'm not Karl Linberg," he said. "I can't help it. I'm sorry, but I'm not Karl Linberg." ...

—Kurt Vonnegut, Jr. excerpted from "This Son of Mine..." The Saturday Evening Post, August 18, 1956

- 1 The author's description in lines 1 through 5 introduces a conflict by including details about
 - (1) an industry competitor
 - (2) an unexpected financial loss
 - (3) a revised production schedule
 - (4) a business opportunity
- 2 Merle's invitation (lines 8 through 10) illustrates his
 - (1) pride in Franklin
 - (2) anger at Rudy
 - (3) respect for the Linberg family
 - (4) concern about the Waggoner factory
- 3 Rudy's "deep and narrow dignity" (line 12) hints at his
 - (1) contentment with his position in life
 - (2) respect for Merle's bond with Franklin
 - (3) pride in Franklin's decisions
 - (4) ambition to take over the company
- 4 Lines 17 through 21 suggest that Karl's attitude is a result of his
 - (1) health
- (3) schooling
- (2) upbringing
- (4) status
- 5 Lines 35 through 42 serve to illustrate the
 - (1) tension between Merle and Rudy
 - (2) conflict between Franklin and Karl
 - (3) relationship between Merle and Franklin
 - (4) competition between Rudy and Karl
- 6 The references to the plate and cubes (lines 32 through 34 and lines 55 through 61) create a connection to
 - (1) Merle's desired relationship with his son
 - (2) Karl's ambitious drive to improve the business
 - (3) Franklin's obedience to his father
 - (4) Rudy's devotion to the business

- 7 Franklin's response in lines 49 through 52 reveals his desire to
 - (1) pacify his father
 - (2) recreate the fine workmanship
 - (3) collaborate with his father
 - (4) take over the factory
- 8 Which lines reveal a shift in Franklin's perspective?
 - (1) "The tapping was a signal that Franklin had seen many times on hunts" (lines 26 and 27)
 - (2) "Yes, sir,' said Franklin. 'They're what Rudy Linberg had to make when he was an apprentice in Sweden'" (lines 45 and 46)
 - (3) "The idea of converting Waggoner Pump into something equally complicated hadn't occurred to him, and appalled him now" (lines 74 and 75)
 - (4) "'I'm not Karl Linberg,' he said. 'I can't help it. I'm sorry, but I'm not Karl Linberg'" (lines 90 and 91)
- 9 Which quotation best reflects a central theme in the text?
 - (1) "He was Merle's age, and he had the deep and narrow dignity of a man who had learned his limitations early" (lines 11 and 12)
 - (2) "He seemed sobered by fifty-one years of life, though he'd lived only twenty" (lines 18 and 19)
 - (3) "The cube could be slipped through the hole in twenty-four different ways, without letting the tiniest ray of light pass through with it" (lines 47 and 48)
 - (4) "He was being asked to match his father's passion for the factory with an equal passion for something else. And Franklin had no such passion" (lines 75 through 77)

Reading Comprehension Passage B

View with a Grain of Sand

We call it a grain of sand but it calls itself neither grain nor sand. It does just fine without a name, whether general, particular, permanent, passing, incorrect or apt.

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Our glance, our touch mean nothing to it. It doesn't feel itself seen and touched. And that it fell on the windowsill is only our experience, not its.

is only our experience, not its.

For it it's no different than falling on anything else with no assurance that it's finished falling or that it's falling still.

The window has a wonderful view of a lake

15 but the view doesn't view itself.

It exists in this world
colorless, shapeless,
soundless, odorless, and painless.

The lake's floor exists floorlessly
20 and its shore exists shorelessly.
Its water feels itself neither wet nor dry
and its waves to themselves are neither singular nor plural.
They splash deaf to their own noise
on pebbles neither large nor small.

- And all this beneath a sky by nature skyless in which the sun sets without setting at all and hides without hiding behind an unminding cloud. The wind ruffles it, its only reason being that it blows.
- 30 A second passes.A second second.A third.But they're three seconds only for us.

Time has passed like a courier with urgent news.

But that's just our simile.

The character's invented, his haste is make-believe, his news inhuman.

—Wislawa Szymborska from *Polish Poetry of the Last Two Decades of Communist Rule*, translated by Stanislaw Barańczak and Clare Cavanagh Northwestern University Press, 1991

- 10 The statement "Our glance, our touch mean nothing to it" (line 7) helps to establish the concept of
 - (1) human resentment of the natural order
 - (2) nature's superiority
 - (3) human control over the environment
 - (4) nature's indifference
- 11 The purpose of lines 14 through 18 is to present
 - (1) a contrast with human reliance on the senses
 - (2) a focus on the complexity of natural events
 - (3) an emphasis on human need for physical beauty
 - (4) an appreciation for the role of nature in everyday life
- 12 Lines 30 through 33 contribute to the poem's meaning by
 - (1) questioning the finality of death
 - (2) commenting on human perception
 - (3) revealing the power of anticipation
 - (4) describing an unusual phenomenon

- 13 The inclusion of the figurative language in the final stanza serves to
 - (1) modify an argument
 - (2) stress a value
 - (3) reinforce a central idea
 - (4) resolve a conflict
- 14 The poem is developed primarily through the use of
 - (1) examples
 - (2) exaggerations
 - (3) cause and effect
 - (4) question and answer

Reading Comprehension Passage C

"The Russell-Einstein Manifesto," signed by a group of eleven intellectuals and scientists including Bertrand Russell and Albert Einstein, was written at the height of the Cold War.

In the tragic situation which confronts humanity, we feel that scientists should assemble in conference to appraise the perils that have arisen as a result of the development of weapons of mass destruction, and to discuss a resolution in the spirit of the appended draft.

We are speaking on this occasion, not as members of this or that nation, continent, or creed, but as human beings, members of the species Man, whose continued existence is in doubt. The world is full of conflicts; and, overshadowing all minor conflicts, the titanic struggle between Communism and anti-Communism. ...

We have to learn to think in a new way. We have to learn to ask ourselves, not what steps can be taken to give military victory to whatever group we prefer, for there no longer are such steps; the question we have to ask ourselves is: what steps can be taken to prevent a military contest of which the issue must be disastrous to all parties? ...

No doubt in an H-bomb¹ war great cities would be obliterated. But this is one of the minor disasters that would have to be faced. If everybody in London, New York, and Moscow were exterminated, the world might, in the course of a few centuries, recover from the blow. But we now know, especially since the Bikini test,² that nuclear bombs can gradually spread destruction over a very much wider area than had been supposed. ...

Many warnings have been uttered by eminent men of science and by authorities in military strategy. None of them will say that the worst results are certain. What they do say is that these results are possible, and no one can be sure that they will not be realized. We have not yet found that the views of experts on this question depend in any degree upon their politics or prejudices. They depend only, so far as our researches have revealed, upon the extent of the particular expert's knowledge. We have found that the men who know most are the most gloomy.

Here, then, is the problem which we present to you, stark and dreadful and inescapable: Shall we put an end to the human race; or shall mankind renounce war? People will not face this alternative because it is so difficult to abolish war.

The abolition of war will demand distasteful limitations of national sovereignty. But what perhaps impedes understanding of the situation more than anything else is that the term "mankind" feels vague and abstract. People scarcely realize in imagination that the danger is to themselves and their children and their grandchildren, and not only to a dimly apprehended humanity. They can scarcely bring themselves to grasp that they, individually, and those whom they love are in imminent³ danger of perishing agonizingly. And so they hope that perhaps war may be allowed to continue provided modern weapons are prohibited.

This hope is illusory. Whatever agreements not to use H-bombs had been reached in time of peace, they would no longer be considered binding in time of war, and both sides would set to work to manufacture H-bombs as soon as war broke out, for, if one side manufactured the bombs and the other did not, the side that manufactured them would inevitably be victorious.

Although an agreement to renounce nuclear weapons as part of a general reduction of armaments would not afford an ultimate solution, it would serve certain important purposes.

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¹H-bomb — hydrogen bomb

²Bikini test — reference to an American test of a hydrogen bomb conducted at the Bikini Atoll in the Pacific Ocean on March 1st, 1954. The bomb sent radioactive debris across the globe.

³imminent — about to take place

First: any agreement between East and West is to the good in so far as it tends to diminish tension. Second: the abolition of thermo-nuclear weapons, if each side believed that the other had carried it out sincerely, would lessen the fear of a sudden attack in the style of Pearl Harbour, which at present keeps both sides in a state of nervous apprehension. We should, therefore, welcome such an agreement, though only as a first step.

Most of us are not neutral in feeling, but, as human beings, we have to remember that, if the issues between East and West are to be decided in any manner that can give any possible satisfaction to anybody, whether Communist or anti-Communist, whether Asian or European or American, whether White or Black, then these issues must not be decided by war. We should wish this to be understood, both in the East and in the West.

There lies before us, if we choose, continual progress in happiness, knowledge, and wisdom. Shall we, instead, choose death, because we cannot forget our quarrels? We appeal, as human beings, to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death.

Resolution

We invite this Congress,⁴ and through it the scientists of the world and the general public, to subscribe to the following resolution:

"In view of the fact that in any future world war nuclear weapons will certainly be employed, and that such weapons threaten the continued existence of mankind, we urge the Governments of the world to realize, and to acknowledge publicly, that their purpose cannot be furthered by a world war, and we urge them, consequently, to find peaceful means for the settlement of all matters of dispute between them."

—Bertrand Russell excerpted from "The Russell–Einstein Manifesto" July 9, 1955

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⁴Congress — the group of scientists who signed the Manifesto

- 15 Lines 1 through 4 set a tone of
 - (1) caution
- (3) hostility
- (2) futility
- (4) accusation
- 16 The position taken in lines 9 through 12 suggests
 - (1) a justification of modern warfare and politics
 - (2) a connection between military victory and the destruction of Communism
 - (3) the similarity of Communist and anti-Communist ideals
 - (4) the relationship between military conflict and ultimate disaster
- 17 Lines 18 through 24 help to refine the central idea in the text by
 - (1) including statements that express opposing points of view
 - (2) providing a summary of the opinions of experts in this area
 - (3) encouraging individuals to become involved with the cause
 - (4) opposing an involvement by politicians and scientists
- 18 The rhetorical question posed in line 26 emphasizes the
 - (1) unavoidable nature of the problem
 - (2) important issue of national sovereignty
 - (3) likely elimination of weapons of mass destruction
 - (4) probable establishment of a new world power
- 19 The phrase "dimly apprehended" (lines 31 and 32) suggests that average people's understanding of the concept of mankind is
 - (1) realistic
- (3) pessimistic
- (2) limited
- (4) insightful
- 20 As used in line 36, the word "illusory" most closely means
 - (1) deceptive
- (3) regrettable
- (2) sustainable
- (4) certain

- 21 Lines 41 through 47 suggest that a potential agreement on weaponry would be
 - (1) successful
- (3) unpopular
- (2) controversial
- (4) helpful
- 22 Which statement from the text is best supported by lines 48 through 52?
 - (1) "We have found that the men who know most are the most gloomy" (lines 23 and 24)
 - (2) "The abolition of war will demand distasteful limitations of national sovereignty" (line 28)
 - (3) "And so they hope that perhaps war may be allowed to continue provided modern weapons are prohibited" (lines 33 through 35)
 - (4) "Remember your humanity, and forget the rest" (line 55)
- 23 The "Resolution" stated in lines 58 through 64 serves to
 - (1) advise the Congress to debate the proposal
 - (2) stress the importance of non-military solutions to conflicts
 - (3) demand the elimination of weapons of mass destruction
 - (4) condemn the Governments that violate the Manifesto
- 24 The Manifesto states that the presence of nuclear weapons requires individuals to
 - (1) advocate for international conflict resolution
 - (2) elect politicians who will support disarmament
 - (3) participate in public discussions about the military
 - (4) prepare the communities for nuclear attack

Part 2

Argument

Directions: Closely read each of the *four* texts provided on pages 11 through 18 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 food be genetically modified?

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 the genetic modification of food. 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 the genetic modification of food
- 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 – GMOs 101

Text 2 – GMO Reality Check

Text 3 – GMO Foods: Key Points in the Genetically Modified Debate

Text 4 – The Truth about Genetically Modified Food

Text 1

GMOs 101

The six questions on every shopper's mind about the new biotech foods. ...

1 What are GMOs [Genetically Modified Organism], and what are they used for?

A GMO is created by injecting genetic material from plants, animals, or bacteria into a crop in hopes of creating a new and beneficial trait. For example, one of the most popular genetically modified (GM) crops is a corn plant that's capable of producing its own pesticide, called Bt, which is also used in spray form by some organic farmers. The idea is to make the plant resistant to insect damage and to limit the amount of harmful pesticides farmers have to spray. Other GM plants, such as Roundup Ready corn, were created to survive the spraying of the herbicide Roundup, which kills weeds and would normally kill the plant, too, says Stephen H. Howell, Ph.D., director of the Plant Sciences Institute at Iowa State University.

Researchers are also using the technology experimentally as a way to nutritionally enhance fruits and vegetables.

Some GMO supporters say that both applications are necessary to help feed a growing world population, especially in poor countries where drought and famine are common. But there is very little agreement on whether biotechnology offers a uniform way to address world hunger. "We have plenty of food for the world right now. It's not the deficiency of technology that's a problem for developing countries," says Jane Rissler, Ph.D., a senior staff scientist with the Union of Concerned Scientists, a nonprofit watchdog group that partners with 80,000 researchers. The international hunger problem, she says, stems from "poverty, corruption, and poor distribution."

2 What kinds of foods contain GMOs?

About 80 percent of the food on grocery-store shelves already contains at least some ingredients made from altered genes. This means that almost any processed food, from salad dressing to snack crackers, could contain GMOs, unless it has been certified organic (federal regulations explicitly restrict food manufacturers from using the organic seal on products made with GMOs). That's because corn, soy, and canola are the top three GM food crops in the United States, so anything that is produced with corn syrup, high-fructose corn syrup, or soybean or corn oil might include GMOs.

Very little fresh produce on the market, though, is genetically engineered, with the exceptions of most papaya, some squash, and a few strains of sweet corn. Meanwhile, we're not the only ones consuming GMOs—animals do, too. GM corn and soybeans are often used in livestock feed, though there's no evidence that GMOs show up in your steak or chops.

3 Should I be concerned about the safety of GM foods?

Federal agencies like the U.S. Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA) say that they are safe, and there have been no documented cases of illness due to consumption of GMOs. The American Medical Association agrees at this point and has encouraged ongoing research in the field. ...

4 What do GM crops mean for the environment?

"I think a lot of scientists agree that there are no known environmental problems with the crops that are out there now," says Allison Snow, Ph.D., who studies environmental risk

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and genetically modified crops as a professor of ecology at Ohio State University. But organic farmers are becoming increasingly concerned about maintaining the integrity of their crops. For example, if Bt corn is planted too close to a neighboring organic-corn crop, crosspollination could occur and contaminate the latter.

Scientists on both sides of the debate also widely agree that insects will eventually become resistant to the Bt crops, Snow says. "It could happen any year now. Then we would be back where we started, and we would have lost a valuable tool for managing insects," Snow says. ...

5 Is it possible to live completely GMO-free?

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Probably not. A study commissioned by the Union of Concerned Scientists and released in February already suggests that seeds that are supposedly non-GMO may be unintentionally tainted. Genetically engineered DNA was found in at least half of the small sample of tested corn and soybean seeds, and about 83 percent of the canola seeds. Even if you buy only certified-organic products, you probably can't avoid GMOs completely. That's because it is also possible for organic food crops to become inadvertently contaminated. ...

6 What will we see next from the biotech-food market?

Here are some GM foods that might end up on store shelves:

- The FDA and USDA are currently reviewing safety data on a variety of genetically engineered wheat that would tolerate the herbicide Roundup.
- Researchers are also working on wheat varieties that would resist drought, be less allergenic to those with gluten intolerance, and be more nutritious.

Consumers may also start seeing major nutritional benefits in the future:

- Scientists at the University of California, Riverside, announced last year [2003] that they genetically engineered a corn plant to produce up to four times the normal amount of vitamin C by inserting a gene from wheat plants. The researchers have filed a patent application and are soliciting companies that might be interested in commercializing the product. ...
- Other biotech foods that are currently in development include a vitamin A--enhanced rice and a tomato with increased amounts of the cancer-fighting antioxidant lycopene.
- Monsanto Co., which is the largest producer of GM seeds, is continuing to tinker with soybeans in hopes of developing a variety that could produce an oil containing few or no saturated and trans fats.

—Alisa Blackwood excerpted and adapted from "GMOs 101" *Health*, May 2004

Text 2

GMO Reality Check

... GMO Basics

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So what are GMOs? To put it simply, they're plants and seeds created in laboratories. Genetic engineers insert genes from bacteria, viruses, animals, or humans into the DNA of a food crop or animal to create an organism that would never occur in nature. Biotech companies do this for two main reasons: to make crops that are tolerant to herbicides such as RoundUp that kill other plants, and to make crops that produce their own insecticides.

The FDA's own scientists actually warned that these never-before-seen foods could create new toxins and new allergens and needed to be more thoroughly tested, but their concerns were largely ignored. Instead, the US government took the official position that GM foods were "substantially equivalent" to conventional foods and didn't require safety testing or labeling — in sharp contrast to 40 other countries that require such foods be clearly labeled. Commercial planting of genetically modified seeds in the United States began in 1996, and soon after, food products containing GMOs began appearing on store shelves, mostly without our knowledge.

By 2011, 94 percent of all soybeans and 88 percent of all corn grown in the United States was genetically modified. Soy and corn, along with other common GM foods (including canola oil. [sic] cottonseed oil, and sugar from sugar beets), are used as ingredients in countless other products, so many Americans -- including health food shoppers -- likely have been eating GM foods without realizing it.

No Benefits, Just Risks

What we didn't know about what we were eating may already be harming us. Based on animal research with GM foods, the American Academy of Environmental Medicine (AAEM) says that there are serious health risks associated with eating GM foods, including infertility, immune system problems, accelerated aging, disruption of insulin and cholesterol regulation, gastrointestinal issues, and changes in organs. In 2009, the AAEM urged doctors to prescribe non-GMO diets for all Americans, saying that doctors are probably seeing negative health effects in their patients right now without realizing that GM foods are major contributing factors.

Genetically modified crops pose risks to the environment, too, including the serious threat of GM seeds spreading to and contaminating both organic and conventional crop fields. Plus, the biotech industry claims that genetic engineering reduces the use of pesticides, but research shows otherwise. According to a 2009 report by the Organic Center, overall pesticide use dramatically increased -- about 318 million pounds -- in the first thirteen years after GM crops were introduced.

Herbicides sprayed in high amounts on GM herbicide-resistant crops have led to the development and spread of so-called "superweeds" -- weeds that are able to adapt to and withstand typical herbicides. And the biotech companies' proposed solution to this problem? Create new GM crops that are resistant to ever more toxic chemicals, including 2, 4-D -- a major component of Agent Orange. It's a "crazy" idea because weeds would eventually adapt to that herbicide and any others, says Andrew Kimbrell, executive director of the Center for Food Safety and author of Your Right to Know: Genetic Engineering and the Secret Changes in Your Food.

¹Agent Orange — chemical used as part of herbicidal warfare programs

The most important thing to know about GM foods is that they benefit only the chemical companies that produce them, says Kimbrell. "[The biotech companies] have yet to produce anything that benefits the consumer. There's no better taste, no better nutrition, no lower price. That's the dirty little secret that's hardly ever reported. That's why those companies don't want GM foods labeled. They don't want the consumer to be able to have the choice to say, 'I want the same price, less risky version.'"...

—Melissa Diane Smith excerpted from "GMO Reality Check" Better Nutrition, August 2012

GMO Foods: Key Points in the Genetically Modified Debate

... Safe or Unsafe?

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Most studies show genetically modified foods are safe for human consumption, though it is widely acknowledged that the long-term health effects are unknown. The Food and Drug Administration generally recognized these foods as safe, and the World Health Organization has said no ill health effects have resulted on the international market.

Opponents on both sides of the Atlantic say there has been inadequate testing and regulation. They worry that people who eat genetically modified foods may be more prone to allergies or diseases resistant to antibiotics. But they have been hard pressed to show scientific studies to back up those fears.

GM foods have been a mainstay in the U.S. for more than a decade. Most of the crops are used for animal feed or in common processed foods such as cookies, cereal, potato chips and salad dressing.

Europe largely bans genetically engineered foods and has strict requirements on labeling them. They do allow the import of a number of GM crops such as soy, mostly for animal feed, and individual European countries have opted to plant these types of crops. Genetically engineered corn is grown in Spain, though it amounts to only a fraction of European farmland. ...

Can GM Food Help Combat World Hunger?

By 2050, the world's population is projected to rise to 9 billion from just over 7 billion currently. Proponents of genetically modified foods say they are safe and can boost harvests even in bad conditions by protecting against pests, weeds and drought. This, they argue, will be essential to meeting the needs of a booming population in decades to come and avoiding starvation.

However Doug Gurian-Sherman, senior scientist for the food and environment program at the Union of Concerned Scientists, an advocacy group, said genetic engineering for insect resistance has provided only a modest increase in yields since the 1990s and drought-resistant strains have only modestly reduced losses from drought.

Moreover, he said conventional crossbreeding or cross-pollinating of different varieties for desirable traits, along with improved farming, are getting better results boosting yields at a lower cost. In fact, much of the food Americans eat has been genetically modified by those conventional methods over thousands of years, before genetic engineering came into practice. ...

Andrea Roberto Sonnino, chief of research at the U.N. food agency, said total food production at present is enough to feed the entire global population. The problem is uneven distribution, leaving 870 million suffering from hunger. He said world food production will need to increase by 60 percent to meet the demands of 9 billion by 2050. This must be achieved by increasing yields, he added, because there is little room to expand cultivated land used for agriculture.

Genetically modified foods, in some instances, can help if the individual product has been assessed as safe, he said. "It's an opportunity that we cannot just miss."

To Label or Not to Label?

Europe requires all GM food to be labeled unless GM ingredients amount to 0.9 percent or less of the total. The U.S. does not require labels on the view that genetically modified food is not materially different than non-modified food. Opponents of labeling say it would scare consumers away from safe foods, giving the appearance that there is something wrong with them.

U.S. activists insist consumers should have the right to choose whether to eat genetically modified foods and that labeling would offer them that choice, whether the foods are safe or not. They are pushing for labeling at the state and federal level. California voters last year rejected a ballot initiative that would have required GM food labeling. The legislatures of Connecticut and Maine have passed laws to label genetically modified foods, and more than 20 other states are contemplating labeling. ...

—Marjorie Olster excerpted from "GMO Foods: Key Points in the Genetically Modified Debate" http://www.huffingtonpost.com, August 2, 2013

Text 4

The Truth about Genetically Modified Food

... Benefits and Worries

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The bulk of the science on GM safety points in one direction. Take it from David Zilberman, a U.C. Berkeley agricultural and environmental economist and one of the few researchers considered credible by both agricultural chemical companies and their critics. He argues that the benefits of GM crops greatly outweigh the health risks, which so far remain theoretical. The use of GM crops "has lowered the price of food," Zilberman says. "It has increased farmer safety by allowing them to use less pesticide. It has raised the output of corn, cotton and soy by 20 to 30 percent, allowing some people to survive who would not have without it. If it were more widely adopted around the world, the price [of food] would go lower, and fewer people would die of hunger." ...

Despite such promise, much of the world has been busy banning, restricting and otherwise shunning GM foods. Nearly all the corn and soybeans grown in the U.S. are genetically modified, but only two GM crops, Monsanto's MON8₁₀ maize and BASF's Amflora potato, are accepted in the European Union. Eight E.U. nations have banned GM crops outright. Throughout Asia, including in India and China, governments have yet to approve most GM crops, including an insect-resistant rice that produces higher yields with less pesticide. In Africa, where millions go hungry, several nations have refused to import GM foods in spite of their lower costs (the result of higher yields and a reduced need for water and pesticides). Kenya has banned them altogether amid widespread malnutrition. No country has definite plans to grow Golden Rice, a crop engineered to deliver more vitamin A than spinach (rice normally has no vitamin A), even though vitamin A deficiency causes more than one million deaths annually and half a million cases of irreversible blindness in the developing world. ...

A Clean Record

... Could eating plants with altered genes allow new DNA to work its way into our own? It is theoretically possible but hugely improbable. Scientists have never found genetic material that could survive a trip through the human gut and make it into cells. Besides, we are routinely exposed to—we even consume—the viruses and bacteria whose genes end up in GM foods. The bacterium *B. thuringiensis*, for example, which produces proteins fatal to insects, is sometimes enlisted as a natural pesticide in organic farming. "We've been eating this stuff for thousands of years," [Robert] Goldberg [a plant molecular biologist] says.

In any case, proponents say, people have consumed as many as trillions of meals containing genetically modified ingredients over the past few decades. Not a single verified case of illness has ever been attributed to the genetic alterations. Mark Lynas, a prominent anti-GM activist who last year publicly switched to strongly supporting the technology, has pointed out that every single news-making food disaster on record has been attributed to non-GM crops, such as the *Escherichia coli*—infected organic bean sprouts that killed 53 people in Europe in 2011. ...

Plenty of other credible groups have arrived at the same conclusion. Gregory Jaffe, director of biotechnology at the Center for Science in the Public Interest, a science-based consumer-watchdog group in Washington, D.C., takes pains to note that the center has no official stance, pro or con, with regard to genetically modifying food plants. Yet Jaffe insists the scientific record is clear. "Current GM crops are safe to eat and can be grown safely in the environment," he says. The American Association for the Advancement of Science, the American Medical Association and the National Academy of Sciences have all unreservedly backed GM crops. The U.S. Food and Drug Administration, along with its

counterparts in several other countries, has repeatedly reviewed large bodies of research and concluded that GM crops pose no unique health threats. Dozens of review studies carried out by academic researchers have backed that view. ...

—David H. Freedman excerpted and adapted from "The Truth about Genetically Modified Food" http://www.scientificamerican.com, August 20, 2013

Part 3

Text-Analysis Response

Your Task: Closely read the text provided on pages 20 and 21 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

The following excerpt is from the diary kept by Admiral Richard Byrd when he was alone in a hut at Bolling Advance Weather Base in Antarctica for five months in 1934, with outside temperatures reaching -83°!

...As I saw the situation, the necessities were these: To survive I must continue to husband my strength, doing whatever had to be done in the simplest manner possible and without strain. I must sleep and eat and build up strength. To avoid further poisoning from the fumes, I must use the stove sparingly and the gasoline pressure lantern not at all. Giving up the lantern meant surrendering its bright light, which was one of my few luxuries; but I could do without luxuries for a while. As to the stove, the choice there lay between freezing and inevitable poisoning. Cold I could feel, but carbon monoxide was invisible and tasteless. So I chose the cold, knowing that the sleeping bag provided a retreat. From now on, I decided, I would make a strict rule of doing without the fire for two or three hours every afternoon.

So much for the practical procedure. If I depended on this alone, I should go mad from the hourly reminders of my own futility. Something more—the will and desire to endure these hardships—was necessary. They must come from deep inside me. But how? By taking control of my thought. By extirpating¹ all lugubrious² ideas the instant they appeared and dwelling only on those conceptions which would make for peace. A discordant mind, black with confusion and despair, would finish me off as thoroughly as the cold. Discipline of this sort is not easy. Even in April's and May's serenity I had failed to master it entirely.

That evening I made a desperate effort to make these conclusions work for me. Although my stomach was rebellious, I forced down a big bowl of thin soup, plus some vegetables and milk. Then I put the fire out; afterwards, propped up in the sleeping bag, I tried to play Canfield. But the games, I remember, went against me; and this made me profoundly irritable. I tried to read Ben Ames Williams' All the Brothers Were Valiant; but, after a page or two, the letters became indistinct; and my eyes ached—in fact, they had never stopped aching. I cursed inwardly, telling myself that the way the cards fell and the state of my eyes were typical of my wretched luck. The truth is that the dim light from the lantern was beginning to get on my nerves. In spite of my earlier resolve to dispense with it, I would have lighted the pressure lantern, except that I wasn't able to pump up the pressure. Only when you've been through something like that do you begin to appreciate how utterly precious light is.

Something persuaded me to take down the shaving mirror from its nail near the shelf. The face that looked back at me was that of an old and feeble man. The cheeks were sunken and scabrous³ from frostbite, and the bloodshot eyes were those of a man who has been on a prolonged debauch.⁴ Something broke inside me then. What was to be gained by struggling? No matter what happened, if I survived at all, I should always be a physical wreck, a burden upon my family. It was a dreadful business. All the fine conceptions of the afternoon dissolved in black despair.

The dark side of a man's mind seems to be a sort of antenna tuned to catch gloomy thoughts from all directions. I found it so with mine. That was an evil night. It was as if all the world's vindictiveness⁵ were concentrated upon me as upon a personal enemy. I sank to

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¹extirpating — completely removing

²lugubrious — melancholy; sad

³scabrous — harsh or rough

⁴debauch — path of corruption

⁵vindictiveness — revengefulness

depths of disillusionment which I had not believed possible. It would be tedious to discuss 40 them. Misery, after all, is the tritest⁶ of emotions. All that need be said is that eventually my faith began to make itself felt; and by concentrating on it and reaffirming the truth about the universe as I saw it, I was able again to fill my mind with the fine and comforting things of the world that had seemed irretrievably lost. I surrounded myself with my family and my friends; I projected myself into the sunlight, into the midst of green, growing things. I 45 thought of all the things I would do when I got home; and a thousand matters which had never been more than casual now became surpassingly attractive and important. But time after time I slipped back into despond. Concentration was difficult, and only by the utmost persistence could I bring myself out of it. But ultimately the disorder left my mind; and, 50 when I blew out the candles and the lantern, I was living in the world of the imagination a simple, uncomplicated world made up of people who wished each other well, who were peaceful and easy-going and kindly.

The aches and pains had not subsided; and it took me several hours to fall asleep; but that night I slept better than on any night since May 31st [several days earlier]; and in the morning was better in mind and body both.

—Richard E. Byrd excerpted and adapted from *Alone*, 1938 G.P. Putnam's Sons

⁶tritest — most overused

⁷despond — state of hopelessness

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