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 START THIS EXAMINATION UNTIL YOU ARE TOLD TO DO SO.
DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.
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

Caramelo

One would think now that she was living in Chicago, in the same city as her [favorite son] Inocencio, the Grandmother would find happiness. But no, that wasn’t the case. The Grandmother was meaner than ever. She was unhappy. And didn’t know she was unhappy, the worst kind of unhappiness of all. As a result, everyone was in a hurry to find her a house of some sort. A bungalow, a duplex, a brownstone, an apartment. Something, anything, because the Grandmother’s gloominess was the contagious kind, infecting every member of the household as fiercely as the bubonic plague.

Because Baby [Inocencio’s brother] and Ninfa’s apartment had room to accommodate a guest, it was understood the Grandmother would stay with them until she could find a house of her own. This had seemed all well and fine when the plans were made long-distance with Uncle Baby shouting into the receiver that he insisted, that he and Ninfa wouldn’t think of her staying anywhere else, that the girls were thrilled she was coming. But now that she was actually sleeping in [granddaughter] Amor’s narrow bed with radios and televisions chattering throughout the apartment, and doors and cupboards banging, and the stink of cigarettes soaking into everything, even her skin, and trucks rumbling past and shaking the building like an earthquake, and sirens and car horns at all hours, well, it just about drove her crazy; even the rowdy Chicago wind, a rough, moody brute who took one look at you and laughed. …
All day and all night the expressway traffic whooshed past, keeping the Grandmother awake. She napped when she could, even when the apartment and its inhabitants jabbered the loudest. She was tired all the time, and yet she had trouble sleeping, often waking once or twice in the early morning, and in her sleeplessness, padding in her house slippers to the living room, where the front windows looked out onto the lanes of traffic, the expressway billboards, and the frighteningly grimy factories beyond. The trucks and cars, furious to get from here to there, never paused for a moment, the sound of the expressway almost not a sound at all, but a roar like the voice of the sea trapped inside a shell.

She pressed her forehead against the cold glass and sighed. If the Grandmother had consulted her feelings, she would’ve understood why it was taking her so long to buy a new house and settle in Chicago, but she was not a woman given to reflection. She missed her old house too much and was too proud to admit she’d made a mistake. She couldn’t go backward, could she? She was stuck, in the middle of nowhere it seemed, halfway between here and where?

The Grandmother missed the routine of her mornings, her three-minute eggs and bolillo breakfasts. She missed rubbing her big toe along the octagon tiles of her bathroom floor. But most of all, she missed her own bed with its mattress sagging in the center, the familiar scent and weight of her blankets, the way morning entered gradually from the left as the sun climbed over the east courtyard wall, the one topped with a cockscomb of glass shards to keep out the thieves. Why do we get so used to waking up in a certain room? And when we aren’t in our own bed and wake up in another, a terrible fear for a moment, like death.

There is nothing worse than being a houseguest for too long, especially when your host is a relative. The Grandmother felt like a prisoner. She hated climbing up the three flights

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1 bolillo — crunchy roll
2 cockscomb — rooster’s crown with jagged edges
of stairs, and always arrived clutching her heart, convinced she was having an attack, like the one that killed Narciso [her husband]. Really, once she was upstairs, she couldn’t even bear the thought of coming back down. What a barbarity! …

To visit Chicago is one thing, to live there another. This was not the Chicago of her vacations, where one is always escorted to the lake shore, to the gold coast, driven along the winding lanes of traffic of Lake Shore Drive in the shadow of beautiful apartment buildings, along State Street and Michigan Avenue to window-shop at least. And perhaps taken on an excursion on the lake. How is it she hadn’t noticed the expression of the citizens, not the ones fluttering in and out of taxis, but the ones at bus stops, hopping like sparrows, shivering and peering anxiously for the next bus, and those descending wearily into the filthy bowels of the subway like the souls condemned to purgatory.³

At first the Grandmother was thrilled by the restaurants and the big discount chains—but then the routine got to be too familiar. Saturdays in search of houses that were not to her liking. Dark brick houses with small, squinty windows, gloomy apartments, or damp little bungalows, everything somber and sad and not letting in enough light, and no courtyards, a dank,⁴ mean gangway, a small patch of thin grass called a garden, and maybe a bald tree in front. This wasn’t what she had in mind.

And as the weeks and months passed, and she was still without a house, the rainy, cold autumn weather began and only made her feel worse. There was the Chicago winter coming that everyone had warned her about, and she was already so cold and miserable she didn’t feel much like leaving her room, let alone the building. She blamed Ninfa, who kept lowering the heat in order to save money. The Grandmother confined herself to bed, satisfied only when she was under several layers of blankets. …

³purgatory — place of suffering
⁴dank — damp
But nothing, nothing in the Grandmother’s imagination prepared her for the horrors of a Chicago winter. It was not the picturesque season of Christmas, but the endless tundra of January, February, and March. Daylight dimmed to a dull pewter. The sun a thick piece of ice behind a dirty woolen sky. It was a cold like you can’t imagine, a barbarous thing, a knife in the bone, a cold so cold it burned the lungs if one could even believe such a cold. And the mountains of filthy snow shoveled in huge heaps, the chunks of ice on the sidewalk that could kill an aged citizen. —Oh, this is nothing, you should’ve been here for the Big Snow, the grandchildren bragged, speaking of the recent storm of ’68.

Big snow or little snow, it was all the same after the novelty of snow had worn off. A nuisance, a deadly thing, an exaggerated, long, drawn-out ordeal that made one feel like dying, that killed one slowly, a torture. Let me die in February, let me die rather than have to step out the door again, please, the Grandmother thought to herself, dreading having to dress like a monster to go outside. —Ay, ya no puedo. I can’t anymore, I can’t. And just when she could no longer, when she could no longer find the strength, the drive, the will to keep on living, when she was ready to fold into herself and let her spirit die, just then, and only then, did April arrive with sky the color of hope and branches filled with possibilities.

—Sandra Cisneros
excerpted and adapted from Caramelo, 2002
Alfred A. Knopf

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5 picturesque — charming
6 pewter — gray
1. The figurative language in lines 5 through 7 establishes a tone of
   (1) loneliness (3) desperation
   (2) confusion (4) shame

2. The second paragraph contributes to a central idea by exposing
   (1) a contrast between the Grandmother’s expectations and reality
   (2) the family’s denial of the Grandmother’s needs
   (3) a struggle between the family’s obligations and desires
   (4) the Grandmother’s appreciation of the family’s lifestyle

3. The details in lines 33 through 38 convey a feeling of
   (1) patience (3) anticipation
   (2) annoyance (4) nostalgia

4. Lines 46 through 49 best serve to
   (1) offer a remedy
   (2) present a contrast
   (3) develop a character
   (4) raise a question

5. The comparison drawn in lines 50 through 53 expresses the Grandmother’s
   (1) awareness of varying experiences of city life
   (2) contempt for the residents of the city
   (3) frustration with the inconvenience of city life
   (4) inability to accept the beauty of the city

6. The description in lines 54 through 59 highlights the Grandmother’s
   (1) excitement (3) disillusionment
   (2) hostility (4) optimism

7. Lines 64 and 65 reveal that the Grandmother is
   (1) rejected by her children
   (2) withdrawing from the family
   (3) insensitive to the needs of others
   (4) fearful of becoming ill
8 The author’s use of the words “barbarity” (line 45) and “barbarous” (line 69) emphasizes the
(1) rejection of the Grandmother
(2) cruelty of the family
(3) harshness of the situation
(4) hopelessness of the future

9 Lines 78 through 81 suggest
(1) an unlikely comparison
(2) a mysterious atmosphere
(3) an escalation of conflict
(4) a shift in perspective

10 Which statement best clarifies the idea that the Grandmother “was not a woman given to reflection” (line 29)?
(1) “She was unhappy. And didn’t know she was unhappy, the worst kind of unhappiness of all.” (lines 3 and 4)
(2) “All day and all night the expressway traffic whooshed past, keeping the Grandmother awake.” (lines 19 and 20)
(3) “She missed rubbing her big toe along the octagon tiles of her bathroom floor.” (lines 34 and 35)
(4) “At first the Grandmother was thrilled by the restaurants and the big discount chains—but then the routine got to be too familiar.” (lines 54 and 55)
As you set out for Ithaka
hope the voyage is a long one,
full of adventure, full of discovery.
Laistrygonians and Cyclops,^2
angry Poseidon^3—don’t be afraid of them:
you’ll never find things like that on your way
as long as you keep your thoughts raised high,
as long as a rare excitement
stirs your spirit and your body.

Laistrygonians and Cyclops,
wild Poseidon—you won’t encounter them
unless you bring them along inside your soul,
unless your soul sets them up in front of you.

Hope the voyage is a long one.

May there be many a summer morning when,
with what pleasure, what joy,

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1Ithaka — In the epic, *The Odyssey*, it took Odysseus 10 years to return to his Greek island home of Ithaka after winning the Trojan war

2Laistrygonians and Cyclops — monsters that Odysseus encountered on his journey home

3Poseidon — the Greek god of the sea who sought to punish Odysseus for harming his son, a Cyclops
you come into harbors seen for the first time;
may you stop at Phoenician trading stations
to buy fine things,

20 mother of pearl and coral, amber and ebony,
sensual perfume of every kind—
as many sensual perfumes as you can;
and may you visit many Egyptian cities
to gather stores of knowledge from their scholars.

Keep Ithaka always in your mind.
Arriving there is what you are destined for.
But do not hurry the journey at all.
Better if it lasts for years,
so you are old by the time you reach the island,

30 wealthy with all you have gained on the way,
not expecting Ithaka to make you rich.

Ithaka gave you the marvelous journey.
Without her you would not have set out.
She has nothing left to give you now.

And if you find her poor, Ithaka won’t have fooled you.
Wise as you will have become, so full of experience,
you will have understood by then what these Ithakas mean.

—C.P. Cavafy
“Ithaka”
from C.P. Cavafy: Collected Poems, 1992
translated by Edmund Keeley and Philip Sherrard
Princeton University Press
11 The references to Laistrygonians, Cyclops, and Poseidon in the first stanza convey the idea that people
(1) can create their own obstacles
(2) can be guided by intuition
(3) should avoid taking risks
(4) should be motivated by fear

12 The repetition in lines 2 and 14 stresses the
(1) value of seeking truth
(2) impossibility of fulfilling desires
(3) importance of embracing life
(4) danger of delaying decisions

13 As used in line 30, the concept of “wealthy” refers to
(1) power
(2) love
(3) money
(4) insight

14 Which phrase best clarifies what Ithaka represents?
(1) “your thoughts raised high” (line 7)
(2) “a rare excitement” (line 8)
(3) “harbors seen for the first time” (line 17)
(4) “what you are destined for” (line 26)
Reading Comprehension Passage C

Get That Song Outta My Head!

The nightmare began when my husband walked into our kitchen and said, “I’ve had this song stuck in my head all day …”

No! I thought. Don’t say it!

“Remember that song from the original Karate Kid movie?” he continued.

For the love of God, no!

“You know how it goes. You’re the best around … na na na na na, na na na na. You’re the best around …”

It was too late. Now I had an earworm — a song, melody or jingle that gets stuck in your head.

The worst part? I only knew that same line. I walked around humming it for days. I tried to shake it by singing along with tunes playing on my car radio while I was out running errands. For a brief time, Van Halen’s “Runnin’ With the Devil” replaced it.

But in no time at all, that one line from “You’re the Best,” sung by Joe Esposito on the The Karate Kid soundtrack, was back.

Perhaps if I heard more of the song in my head, it wouldn’t be as annoying. But just this one line? Over and over and over again? It was pure torture. I needed to do something drastic. I busted out that 1980s hit, “The Safety Dance” by Men Without Hats. After singing it a few times, the earworm was gone.

I knew I’d get another one, though. About 90 percent of people experience earworms at least once a week, according to the Earworm Project run by the Music, Mind and Brain group at Goldsmiths, University of London.
“Music lovers, specifically people who ascribe more importance to music or people who spend more time listening to music, have more frequent and longer earworm episodes,” says Kelly Jakubowski, a researcher with the Earworm Project. 

To find out what causes earworms and how to get rid of them, I contacted the man known as “Dr. Earworm,” James Kellaris, a marketing professor at the University of Cincinnati. Certainly with a nickname like that, he would know something.

Kellaris began studying earworms in 1999. A former professional musician prone to getting earworms himself, he eventually became a marketing professor “interested in how marketers use music to achieve various commercial goals,” he says. “It was a perfect storm to create an earworms researcher.”

He explained to me that when we get an earworm, the tune seems to repeat itself involuntarily, which is why experts consider earworms involuntary musical imagery (INMI). This was exactly what “You’re the Best” had done to me.

So what, precisely, was happening in my brain when I couldn’t shake that tune?

Jakubowski contributed to a May 2015 study led by Nicolas Farrugia, a postdoctoral researcher with the Earworm Project, that demonstrated auditory and inhibitory-related areas play a role in earworms as well.

The researchers examined 44 healthy subjects, all between 25 and 70 years old and all participants of a past neuroimaging study run by the Cambridge Medical Research Council’s Cognition and Brain Sciences Unit. These subjects took an online survey that measured both the extent of their musical training and how strongly INMIs impacted them. For example, the survey wanted to know how strong of a negative impact INMIs had on them or if INMIs were actually helpful while they went about their everyday activities.

When they examined these participants’ brain images, one pattern in particular stuck out: People who got earworms more often had a thinner right frontal cortex, which is...
involved in inhibition,\textsuperscript{2} and a thinner temporal cortex, which processes sensory stimuli like sound. In other words, these people’s brains just weren’t as good at suppressing the random song that might pop into their heads.

Why we get earworms, unfortunately, remains a scientific mystery. “We know that songs that are ‘catchy’ — short, simple, repetitive and contain some incongruity — are most likely to get stuck,” Kellaris says. Most people are more likely to get a song like “Don’t Worry, Be Happy” stuck in their heads than, say, a Mahler symphony. And some things exacerbate them: frequency and duration of exposure to music, worry, stress, fatigue and idleness.

Considering that my husband kept singing the snippet\textsuperscript{3} while I was tired and stressed, I can see why it got stuck. But my earworms have been relatively innocuous.\textsuperscript{4} Even though they’re annoying, I can eventually get rid of them. Some people can’t, though.

Part of Kellaris’ earliest research involved mailing a questionnaire to about 1,000 respondents at four U.S. universities. He asked them if they’d ever had an earworm, for how long, how often it happened, how it made them feel, etc.

One respondent claimed to have had a song stuck in his head since 1978. This is known as intrusive musical imagery (IMI), a musical obsession that’s chronic and highly distracting to a person’s everyday life and work. According to Dean McKay, a psychology professor at Fordham University, my short-lived earworm was nothing compared to an IMI.

But now I was concerned. Could my future earworms turn into these IMIs? Is there a way to prevent this from happening?

McKay co-authored a June 2014 study titled “Musical obsessions: A comprehensive review of neglected clinical phenomena.” For this study, McKay and other international colleagues, all of whom treat obsessive-compulsive disorder, created the first

\textsuperscript{2}inhibition — restraining behavior
\textsuperscript{3}snippet — short piece
\textsuperscript{4}innocuous — harmless
comprehensive review of musical obsessions. They compiled a database of 96 case study descriptions of people with severe musical obsessions — the largest compilation\(^5\) assembled on this topic. They determined the characteristics of musical obsessions such as IMIs and compared them with earworms, musical hallucinations and visual obsessional imagery.

The group’s research showed that IMIs can be treated by using a method known as distraction — coming up with a competing melody to think about that would get rid of the IMI. That’s exactly what I had done, albeit unknowingly, when I used “The Safety Dance” to stop my earworm.

McKay says my earworm was pesky because I knew only that one part of the song. He suggests if I have just a portion of a song looping in my brain in the future, I can try another method called exposure — simply listening to the entire song. “It’s like a completion task,” he says. “Once you know the whole song, then there’s no need for it to be stuck in your head.”

Another form of distraction is to sing the song out loud, but change some of the words or slightly throw off the melody. One of McKay’s patients had an IMI based on a Taylor Swift song. “We made up some other words for it,” he explains. “We messed up the melody a bit, but not so much that it wasn’t recognizable as still being that song, and then it faded.” McKay stresses that this is the only case he’s tried this in, so it’s not a forgone conclusion this kind of distraction would work in other instances.

What I wanted to know was if the earworm I get today could become the IMI of tomorrow.

“Highly improbable,” he says.

“You’re the best,” I reply.

Oh no.

—Michele Wojciechowski
excerpted from “Get That Song Outta My Head!”
Discover, March 2016
15 The anecdote in lines 1 through 9 best serves to
   (1) make a prediction   (3) issue a warning
   (2) establish a conflict   (4) propose a theory

16 Knowledge of earworms (lines 28 through 31) can be utilized in
   (1) education   (3) recording music
   (2) advertising   (4) product design

17 Details regarding individuals’ brain structure (lines 45 through 49) serve to
   (1) estimate the duration of earworms
   (2) reject a hypothesis about earworms
   (3) demonstrate the danger of earworms
   (4) explain a susceptibility to earworms

18 As used in line 53, “exacerbate” most nearly means
   (1) postpone   (3) contradict
   (2) intensify   (4) prevent

19 Lines 56 and 57 serve to highlight a central idea that earworms are
   (1) habitual and damaging
   (2) insignificant, yet pleasurable
   (3) bothersome, yet temporary
   (4) familiar and therapeutic

20 The research of Professor James Kellaris (lines 58 through 64) supports the idea that IMIs may
   (1) disrupt ordinary routine
   (2) cause insomnia
   (3) distort hearing
   (4) interfere with learning

21 According to studies (lines 74 through 77), one way of treating IMIs involves
   (1) toleration   (3) substitution
   (2) medication   (4) conversation

22 The statement “Oh no” (line 93) reflects the narrator’s
   (1) humorous acceptance
   (2) feeling of rejection
   (3) sense of finality
   (4) calm anticipation
23 Which lines best summarize a central idea of the text?

(1) “Music lovers … have more frequent and longer earworm episodes” (lines 22 through 24)
(2) “He explained to me that when we get an earworm, the tune seems to repeat itself involuntarily” (lines 32 and 33)
(3) “He suggests if I have just a portion of a song looping in my brain … I can try another method called exposure” (lines 78 through 80)
(4) “it’s not a forgone conclusion this kind of distraction would work in other instances” (lines 87 and 88)

24 The text is presented from the narrator’s perspective in order to

(1) distinguish the narrator’s personal beliefs from research findings
(2) highlight the narrator’s disagreement with current treatments
(3) create an objective tone throughout the text
(4) convey scientific information through a personal experience
Part 2

Argument

Directions: Closely read each of the four texts provided on pages 22 through 32 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: Does the Internet have a negative impact on our thinking process?

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 the Internet has a negative impact on our thinking process. 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 the Internet has a negative impact on our thinking process
• 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 – OK, Google, Where Did I Put My Thinking Cap?
Text 2 – Author Nicholas Carr: The Web Shatters Focus, Rewires Brains
Text 3 – The Memex in Your Pocket
Text 4 – Are We Losing Our Ability to Think Critically?
Text 1

OK, Google, Where Did I Put My Thinking Cap?

Take a look at this question: How do modern novels represent the characteristics of humanity?

If you were tasked with answering it, what would your first step be? Would you scribble down your thoughts — or would you Google it?

Terry Heick, a former English teacher in Kentucky, had a surprising revelation when his eighth- and ninth-grade students quickly turned to Google.

“What they would do is they would start Googling the question, ‘How does a novel represent humanity?’” Heick says. “That was a real eye-opener to me.” …

Heick had intended for his students to take a moment to think, figure out what type of information they needed, how to evaluate the data and how to reconcile conflicting viewpoints. He did not intend for them to immediately Google the question, word by word — eliminating the process of critical thinking.

More Space To Think Or Less Time To Think?

There is a relative lack of research available examining the effect of search engines on our brains even as the technology is rapidly dominating our lives. Of the studies available, the answers are sometimes unclear.

Some argue that with easy access to information, we have more space in our brain to engage in creative activities, as humans have in the past. …

Daphne Bavelier, a professor at the University of Geneva, wrote in 2011 that we may have lost the ability for oral memorization valued by the Greeks when writing was invented, but we gained additional skills of reading and text analysis.
Writer Nicholas Carr contends that the Internet will take away our ability for contemplation due to the plasticity of our brains. He wrote about the subject in a 2008 article for *The Atlantic* titled “Is Google Making Us Stupid.”

“…what the [Internet] seems to be doing is chipping away my capacity for concentration and contemplation,” Carr wrote. …

‘I’m Always On My Computer’

Michele Nelson, an art teacher at Estes Hills Elementary School in Chapel Hill, N.C., seems to share Carr’s concerns. Nelson, who has been teaching for more than nine years, says it was obvious with her middle school students and even her 15-year-old daughter that they are unable to read long texts anymore.

“They just had a really hard time comprehending if they went to a website that had a lot of information,” Nelson says. “They couldn’t grasp it, they couldn’t figure out what the important thing was.” …

The bright side lies in a 2009 study conducted by Gary Small, the director of University of California Los Angeles’ Longevity Center, that explored brain activity when older adults used search engines. He found that among older people who have experience using the Internet, their brains are two times more active than those who don’t when conducting Internet searches. …

For Small, the problem for younger people is the overuse of the technology that leads to distraction. Otherwise, he is excited for the new innovations in technology.

“We tend to be economical in terms of how we use our brain, so if you know you don’t have to memorize the directions to a certain place because you have a GPS in your car, you’re not going to bother with that,” Small says. “You’re going to use your mind to remember other kinds of information.” …

—Zhai Yun Tan

excerpted from “OK, Google, Where Did I Put My Thinking Cap?”

[www.npr.org](http://www.npr.org), February 5, 2016
Text 2

Author Nicholas Carr: The Web Shatters Focus, Rewires Brains

…What kind of brain is the Web giving us? That question will no doubt be the subject of a great deal of research in the years ahead. Already, though, there is much we know or can surmise—and the news is quite disturbing. Dozens of studies by psychologists, neurobiologists, and educators point to the same conclusion: When we go online, we enter an environment that promotes cursory\(^1\) reading, hurried and distracted thinking, and superficial learning. Even as the Internet grants us easy access to vast amounts of information, it is turning us into shallower thinkers, literally changing the structure of our brain. …

The depth of our intelligence hinges on our ability to transfer information from working memory, the scratch pad of consciousness, to long-term memory, the mind’s filing system. When facts and experiences enter our long-term memory, we are able to weave them into the complex ideas that give richness to our thought. But the passage from working memory to long-term memory also forms a bottleneck in our brain. Whereas long-term memory has an almost unlimited capacity, working memory can hold only a relatively small amount of information at a time. And that short-term storage is fragile: A break in our attention can sweep its contents from our mind.

Imagine filling a bathtub with a thimble; that’s the challenge involved in moving information from working memory into long-term memory. When we read a book, the information faucet provides a steady drip, which we can control by varying the pace of our reading. Through our single-minded concentration on the text, we can transfer much of the information, thimbleful by thimbleful, into long-term memory and forge the rich associations essential to the creation of knowledge and wisdom.

\(^1\) cursory — incomplete
On the Net, we face many information faucets, all going full blast. Our little thimble overflows as we rush from tap to tap. We transfer only a small jumble of drops from different faucets, not a continuous, coherent stream.

Psychologists refer to the information flowing into our working memory as our cognitive load. When the load exceeds our mind’s ability to process and store it, we’re unable to retain the information or to draw connections with other memories. We can’t translate the new material into conceptual knowledge. Our ability to learn suffers, and our understanding remains weak. That’s why the extensive brain activity that [Gary] Small discovered in Web searchers may be more a cause for concern than for celebration. It points to cognitive overload. …

The penalty is amplified by what brain scientists call switching costs. Every time we shift our attention, the brain has to reorient itself, further taxing our mental resources. Many studies have shown that switching between just two tasks can add substantially to our cognitive load, impeding our thinking and increasing the likelihood that we’ll overlook or misinterpret important information. On the Internet, where we generally juggle several tasks, the switching costs pile ever higher.

The Net’s ability to monitor events and send out messages and notifications automatically is, of course, one of its great strengths as a communication technology. We rely on that capability to personalize the workings of the system, to program the vast database to respond to our particular needs, interests, and desires. We want to be interrupted, because each interruption—email, tweet, instant message, RSS [Really Simple Syndication] headline—

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2 coherent — logical
3 impeding — disrupting
4 RSS — news notification system
brings us a valuable piece of information. To turn off these alerts is to risk feeling out of touch or even socially isolated. The stream of new information also plays to our natural tendency to overemphasize the immediate. We crave the new even when we know it’s trivial. …

We know that the human brain is highly plastic; neurons and synapses change as circumstances change. When we adapt to a new cultural phenomenon, including the use of a new medium, we end up with a different brain, says Michael Merzenich, a pioneer of the field of neuroplasticity. That means our online habits continue to reverberate in the workings of our brain cells even when we’re not at a computer. We’re exercising the neural circuits devoted to skimming and multitasking while ignoring those used for reading and thinking deeply. …

There’s nothing wrong with absorbing information quickly and in bits and pieces. We’ve always skimmed newspapers more than we’ve read them, and we routinely run our eyes over books and magazines to get the gist of a piece of writing and decide whether it warrants more thorough reading. The ability to scan and browse is as important as the ability to read deeply and think attentively. The problem is that skimming is becoming our dominant mode of thought. Once a means to an end, a way to identify information for further study, it’s becoming an end in itself—our preferred method of both learning and analysis. Dazzled by the Net’s treasures, we are blind to the damage we may be doing to our intellectual lives and even our culture. …

—Nicholas Carr
excerpted and adapted from
“Author Nicholas Carr: The Web Shatters Focus, Rewires Brains”
www.wired.com, June 2010

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5 neurons and synapses — parts of the nervous system that pass electrical or chemical signals
6 neuroplasticity — the brain’s ability to reorganize itself
Text 3

The Memex in Your Pocket

...The idea that we could invent tools that change our cognitive\(^1\) abilities might sound outlandish, but it’s actually a defining feature of human evolution. When our ancestors developed language, it altered not only how they could communicate but how they could think. Mathematics, the printing press, and science further extended the reach of the human mind, and by the 20\(^{th}\) century, tools such as telephones, calculators, and Encyclopedia Britannica gave people easy access to more knowledge about the world than they could absorb in a lifetime.

Yet it would be a stretch to say that this information was part of people’s minds. There remained a real distinction between what we knew and what we could find out if we cared to.

The Internet and mobile technology have begun to change that. Many of us now carry our smartphones with us everywhere, and high-speed data networks blanket the developed world. If I asked you the capital of Angola, it would hardly matter anymore whether you knew it off the top of your head. Pull out your phone and repeat the question using Google Voice Search, and a mechanized voice will shoot back, “Luanda.” When it comes to trivia, the difference between a world-class savant\(^2\) and your average modern technophile\(^3\) is perhaps five seconds. And Watson’s Jeopardy!\(^4\) triumph over Ken Jennings\(^4\) suggests even that time lag might soon be erased—especially as wearable technology like Google Glass\(^5\) begins to collapse the distance between our minds and the cloud.

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\(^1\) cognitive — the process of knowing and perceiving

\(^2\) savant — scholar

\(^3\) technophile — a person enthusiastic about technology

\(^4\) Ken Jennings — the 74-time Jeopardy game show champion, defeated by IBM’s super computer, Watson, in 2004

\(^5\) Google Glass — smart glasses
So is the Internet now essentially an external hard drive for our brains? That’s the essence of an idea called “the extended mind,” first propounded by philosophers Andy Clark and David Chalmers in 1998. The theory was a novel response to philosophy’s long-standing “mind-brain problem,” which asks whether our minds are reducible to the biology of our brains. Clark and Chalmers proposed that the modern human mind is a system that transcends the brain to encompass aspects of the outside environment. They argued that certain technological tools—computer modeling, navigation by slide rule, long division via pencil and paper—can be every bit as integral to our mental operations as the internal workings of our brains. They wrote: “If, as we confront some task, a part of the world functions as a process which, were it done in the head, we would have no hesitation in recognizing as part of the cognitive process, then that part of the world is (so we claim) part of the cognitive process.” …

The basic Google search, which has become our central means of retrieving published information about the world—is only the most obvious example. Personal-assistant tools like Apple’s Siri instantly retrieve information such as phone numbers and directions that we once had to memorize or commit to paper. Potentially even more powerful as memory aids are cloud-based note-taking apps like Evernote, whose slogan is, “Remember everything.”

So here’s a second pop quiz. Where were you on the night of Feb. 8, 2010? What are the names and email addresses of all the people you know who currently live in New York City? What’s the exact recipe for your favorite homemade pastry?

Our own brains are brilliant at storing and retrieving information that’s viscerally important to us, like the smile of someone we love or the smell of a food that made us sick, explains Maureen Ritchey, a postdoctoral researcher at U.C.–Davis who specializes in the

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6 transcends — surpasses
7 slide rule — a mechanical device used for computations
8 viscerally — instinctively
neuroscience\(^9\) of memory. But they’re prone to bungle abstract details like the title of a book we wanted to read or the errand we were supposed to run on the way home from work. …

So where were you on that February night three years ago? If you use a modern email program like Gmail, there’s a good chance you can piece it together by calling up your emails from that date. Which of your friends could you crash with or call up for a drink when you visit New York this summer? That’s what Facebook’s new Graph Search is for. See? Your memory is better than you think. …

There are also, of course, pitfalls to having devices that are smart and powerful enough to aid our minds in all sorts of ways.

One is the fear that the same Internet that makes us smarter in relatively superficial ways may also be making us stupid on a deeper level. The writer Nicholas Carr worries that the information age is leading inexorably\(^{10}\) to an age of ADHD [Attention Deficit Hyperactivity Disorder]—that a parade of tweets and hyperlinks is training our brains to expect constant stimulation and thus rendering us incapable of reading a book, let alone sustaining the type of profound contemplation that leads to real wisdom.

There may be some truth in that, though brain scans suggest that searching Google actually stimulates more parts of the brain than reading a book. And it’s worth keeping in mind Carr’s own observation that Socrates\(^{11}\) once bemoaned the rise of the written word on similar grounds. Similarly, 15th-century techno-skeptics fretted that the printing press would weaken people’s minds.

Chalmers points out that this type of reasoning depends on the notion that the human mind is coterminous\(^{12}\) with the brain. Sure, the rise of literature probably eroded our brain’s

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\(^9\) neuroscience — science that deals with the nervous system and brain
\(^{10}\) inexorably — without yielding
\(^{11}\) Socrates — Greek philosopher
\(^{12}\) coterminous — having the same boundaries
capacity to remember epic poems verse by verse. Long before that, Chalmers says, the advent of oral language might well have reshaped our cortexes to the detriment of some primitive sensory capacities or modes of introspection.13 “Maybe the Nicholas Carr of the day said, ‘Hey, language is making us stupider,’ ” Chalmers jokes. …

—Will Oremus

excerpted and adapted from “The Memex In Your Pocket”

www.slate.com, March 7, 2013

13 introspection — self-analysis
Text 4

Are We Losing Our Ability to Think Critically?

...Although there’s little debate that computer technology complements—and often enhances—the human mind in the quest to store information and process an ever-growing tangle of bits and bytes, there’s increasing concern that the same technology is changing the way we approach complex problems and conundrums,¹ and making it more difficult to really think.

“We’re exposed to [greater amounts of] poor yet charismatic thinking, the fads of intellectual fashion, opinion, and mere assertion,” says [researcher and lecturer, Adrian] West. “The wealth of communications and information can easily overwhelm our reasoning abilities.” What’s more, it’s ironic that ever-growing piles of data and information do not equate to greater knowledge and better decision-making. What’s remarkable, West says, is just “how little this has affected the quality of our thinking.” ...

Arriving at a clear definition for critical thinking is a bit tricky. Wikipedia describes it as “purposeful and reflective judgment about what to believe or what to do in response to observations, experience, verbal or written expressions, or arguments.” Overlay technology and that’s where things get complex. “We can do the same critical-reasoning operations without technology as we can with it—just at different speeds and with different ease,” West says.

What’s more, while it’s tempting to view computers, video games, and the Internet in a monolithic² good or bad way, the reality is that they may be both good and bad, and different technologies, systems, and uses yield entirely different results. For example, a computer game may promote critical thinking or diminish it. Reading on the Internet may ratchet up

¹ conundrums — riddles
² monolithic — singularly
one’s ability to analyze while chasing an endless array of hyperlinks may undercut deeper thought.

Michael Bugeja, director of the Greenlee School of Journalism and Communication at Iowa State University of Science and Technology, says: “Critical thinking can be accelerated multifold by the right technology.” On the other hand, “The technology distraction level is accelerating to the point where thinking deeply is difficult. We are overwhelmed by a constant barrage of devices and tasks.” Worse: “We increasingly suffer from the Google syndrome. People accept what they read and believe what they see online is fact when it is not.”

One person who has studied the effects of technology on people is UCLA’s [Patricia] Greenfield. Exposure to technology fundamentally changes the way people think, says Greenfield, who recently analyzed more than 50 studies on learning and technology, including research on multitasking and the use of computers, the Internet, and video games. As reading for pleasure has declined and visual media have exploded, noticeable changes have resulted, she notes.

“Reading enhances thinking and engages the imagination in a way that visual media such as video games and television do not,” Greenfield explains. “It develops imagination, induction, reflection, and critical thinking, as well as vocabulary.” However, she has found that visual media actually improve some types of information processing. Unfortunately, “most visual media are real-time media that do not allow time for reflection, analysis, or imagination,” she says. The upshot? Many people—particularly those who are younger—wind up not realizing their full intellectual potential. …

—Samuel Greengard
excerpted and adapted from
“Are We Losing Our Ability to Think Critically?”
https://cacm.acm.org, July 2009

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3 barrage — overwhelming quantity
4 induction — the process of creating a general rule from specific examples
Part 3

Text-Analysis Response

Your Task: Closely read the text provided on pages 34 through 36 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 a memoir where the author recalls her childhood in post-World War II Poland, when shortages were common and the availability of consumer products was limited.

**Objects of Affection**

...I was a child of the fifties, growing up in a communist country beset by shortages of practically everything—food, clothes, furniture—and that circumstance may have been responsible for my complicated attitude toward objects. We had few toys or books, and we wore mostly hand-me-downs. A pair of mittens, a teddy bear, and a chocolate bar for Christmas were enough. Once in a while we also got skates, bikes, musical instruments. “Abundance” had no place in our vocabulary and in our world, but we were happy with what we had, in the way that only children can be. We were unaware that our lives were in any way circumscribed, although the reality we lived in trained us early on that there was a huge gap between wanting something and getting it. After all, even people with money had to hustle and resort to underhanded maneuvers, including bribery, to buy things. ...

By the time I graduated from high school, I was a person of substance, or so I thought. The shortages never disappeared, but it was easier to get things. I had a Chinese fountain pen and two ballpoint pens, which I kept in my desk drawer and would only use at home. I boasted several records that my sister and I listened to on a gramophone player she had been given as a name-day present a few years before. Some of them were by the popular Polish rock bands, and one was Beethoven’s Fifth Symphony, the only classical music record I had for a long time. I listened to it so often that to this day I can hum the whole piece from beginning to end. I also had a bookcase with a sliding glass front that was filled with books. My parents’ books were arrayed on three broad shelves in the bottom part of a cupboard in

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1 circumscribed — limited
what doubled as our living room and their bedroom. Although both my parents were readers, they rarely bought books, borrowing them instead from the public library. I was very possessive of the books I owned and only reluctantly loaned them to friends. When my younger sister took one out, I insisted she put it back in the exact same spot.

My possessiveness may have had a lot to do with how difficult books were to come by. They were published in small numbers, and there was such a huge demand for them among the intelligentsia that the good ones disappeared from stores very quickly. On my way back from school, I often made a detour and walked by the local bookstore to look in the window where new arrivals would be displayed. That was how I spotted a four-volume *War and Peace* that cost eighty zloty, not a negligible sum. I had only thirty. The clerk told me this was the only copy in the store. I knew the book would be sold soon, so I decided to go to my father’s office and beg him for a loan, which he gave me at once. Clutching the money, I ran back to the bookstore, breathless and worried that the book would no longer be there. I realize that what I’m saying must seem pathetic to a person raised in the comforts of a free market economy where it’s enough to think of something to find it immediately in the store.

It might sound more poignant if I said that books and records helped me escape the surrounding grayness and drabness and that my hunting for them wasn’t solely motivated by my newly developed acquisitiveness or a collector’s instinct. But if I said that, I’d be practicing revisionist history. The truth is that we didn’t see the grayness and drabness—not yet. This realization came much later. So if it was aesthetic escapism, it was the universal kind, not fueled by our peculiar political circumstances.
My youthful materialism thrived in a country where materialism—unless of the Marxist variety—was unanimously condemned as the ugly outgrowth of western consumer societies. We knew this was just an ideological cover-up for the never-ending shortages. My brand of materialism didn’t belong in a consumer society, either, because it was a kind of disproportionate attachment to things that was caused by scarcity, something unheard of in a market economy. I couldn’t want more, new, or better. Such wanting was at best a futile and abstract exercise, so I learned to practice self-limitation. Paradoxically, however, I knew what I liked and wanted, and would have had no trouble making a choice had I been given the chance. When you’re faced with overabundance, assaulted by things and more things, it’s often difficult to say what you like or want, but that at least wasn’t our problem. I don’t mean to praise privation⁸ or claim that we were somehow better or more virtuous than people who inhabited a consumer heaven and whose wishes could be automatically fulfilled. I’m only saying that my relationship to things was developed under a different set of circumstances. I did care about possessions, no question about that. I wanted to hang on to what I had and now and then replenish my stock if I came across the right item. More often than not chance ruled my acquisitions. I had to sift through what was available in the hopes of finding something special among a slew of worthless objects. That was also true of buying the so-called practical items. I might have been walking by a shoe store when I spotted a delivery truck. That sight would have been enough to make me stand in line.

If I was lucky, I might have ended up buying a pair of sneakers. I might have also wasted my time because I liked none of the shoes or couldn’t get my size. People would often buy things they didn’t need or want, just in case. You could never tell when those things might come in handy or be used to barter⁹. …

—Ewa Hryniewicz-Yarbrough
excerpted from “Objects of Affection”
*Ploughshares*, Spring 2011

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⁸ privation — lack of necessities
⁹ barter — trade