

## Reading Test Sample Paired Passages - Science

Questions 1-11 are based on the following passages. Passage 1 is adapted from Nicholas Carr, “Author Nicholas Carr: The Web Shatters Focus, Rewires Brains.” ©2010 by Condé Nast.

### Passage 1

5 The mental consequences of our online info-crunching are not universally bad. Certain cognitive skills are strengthened by our use of computers and the Net. These tend to involve more primitive mental functions, such as hand-eye coordination, reflex response, and the processing of visual cues. One much-cited study of video gaming revealed that after just 10 10 days of playing action games on computers, a group of young people had significantly boosted the speed with which they could shift their visual focus between various images and tasks.

15 It’s likely that Web browsing also strengthens brain functions related to fast-paced problem solving, particularly when it requires spotting patterns in a welter of data. A British study of the way women search for medical information online indicated that an experienced Internet user can, at least in some cases, assess the trustworthiness and probable value of a Web page in a matter of seconds. The more we practice surfing and scanning, the more adept our brain becomes at those tasks.

20 But it would be a serious mistake to look narrowly at such benefits and conclude that the Web is making us smarter. In a Science article published in early 2009, prominent developmental psychologist Patricia Greenfield reviewed more than 40 studies of the effects of various types of media on intelligence and learning ability. She concluded that “every medium develops some cognitive skills at the expense of others.” Our growing use of the Net and other screen-based technologies, she wrote, has led to the “widespread and sophisticated development of visual-spatial skills.” But those gains go hand in hand with a weakening of our capacity for the kind of “deep processing” that underpins “mindful knowledge acquisition, inductive analysis, critical thinking, imagination, and reflection.”

45 We know that the human brain is highly plastic; neurons and synapses change as circumstances change. When we adapt to a new

Passage 2 is from Steven Pinker, “Mind over Mass Media.” ©2010 by The New York Times Company.

50 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 55 those used for reading and thinking deeply.

### Passage 2

60 Critics of new media sometimes use science itself to press their case, citing research that shows how “experience can change the brain.” But cognitive neuroscientists roll their eyes at such talk. Yes, every time we learn a fact or skill the wiring of the brain changes; it’s not as if the information is stored in the pancreas. But the existence of neural plasticity does not mean the brain is a blob of clay 65 pounded into shape by experience.

70 Experience does not revamp the basic information-processing capacities of the brain. Speed-reading programs have long claimed to do just that, but the verdict was rendered by Woody Allen after he read Leo Tolstoy’s famously long novel War and Peace in one sitting: “It was about Russia.” Genuine 75 multitasking, too, has been exposed as a myth, not just by laboratory studies but by the familiar sight of an SUV undulating between lanes as the driver cuts deals on his cell phone.

80 Moreover, the effects of experience are highly specific to the experiences themselves. If you train people to do one thing (recognize shapes, solve math puzzles, find hidden words), they get better at doing that thing, but almost nothing else. Music doesn’t make you better at math, conjugating Latin doesn’t make you more logical, brain-training games don’t make you smarter. Accomplished people don’t bulk up their brains with intellectual calisthenics; they immerse themselves in their fields.

90 Novelists read lots of novels, scientists read lots of science.

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The effects of consuming electronic media are likely to be far more limited than the panic implies. Media critics write as if the brain takes on the qualities of whatever it consumes, the informational equivalent of “you are what you eat.” As with ancient peoples who believed that eating fierce animals made them fierce, they assume that watching quick cuts in rock videos turns your mental life into quick cuts or that reading bullet points and online postings turns your thoughts into bullet points and online postings.

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1. The author of Passage 1 indicates which of the following about the use of screen-based technologies?
  - A) It should be thoroughly studied.
  - B) It makes the brain increasingly rigid.
  - C) It has some positive effects.
  - D) It should be widely encouraged.
2. Which choice provides the best evidence for the answer to the previous question?
  - A) Lines 2-4 (“Certain... Net”)
  - B) Lines 26-28 (“But... smarter”)
  - C) Lines 28-33 (“In a... ability”)
  - D) Lines 33-35 (“She... others”)
3. The author of Passage 1 indicates that becoming adept at using the Internet can
  - A) make people complacent about their health.
  - B) undermine the ability to think deeply.
  - C) increase people’s social contacts.
  - D) improve people’s self-confidence.
4. As used in line 45, “plastic” most nearly means
  - A) creative.
  - B) artificial.
  - C) malleable.
  - D) sculptural.
5. The author of Passage 2 refers to the novel War and Peace primarily to suggest that Woody Allen
  - A) did not like Tolstoy’s writing style.
  - B) could not comprehend the novel by speed-reading it.
  - C) had become quite skilled at multitasking.
  - D) regretted having read such a long novel.
6. According to the author of Passage 2, what do novelists and scientists have in common?
  - A) They take risks when they pursue knowledge.
  - B) They are eager to improve their minds.
  - C) They are curious about other subjects.
  - D) They become absorbed in their own fields.
7. The analogy in the final sentence of Passage 2 has primarily which effect?
  - A) It uses ornate language to illustrate a difficult concept.
  - B) It employs humor to soften a severe opinion of human behavior.
  - C) It alludes to the past to evoke a nostalgic response.
  - D) It criticizes the view of a particular group.
8. The main purpose of each passage is to
  - A) compare brain function in those who play games on the Internet and those who browse on it.
  - B) report on the problem-solving skills of individuals with varying levels of Internet experience.
  - C) take a position on increasing financial support for studies related to technology and intelligence.
  - D) make an argument about the effects of electronic media use on the brain.
9. Which choice best describes the relationship between the two passages?
  - A) Passage 2 relates first-hand experiences that contrast with the clinical approach in Passage 1.
  - B) Passage 2 critiques the conclusions drawn from the research discussed in Passage 1.
  - C) Passage 2 takes a high-level view of a result that Passage 1 examines in depth.
  - D) Passage 2 predicts the negative reactions that the findings discussed in Passage 1 might produce.

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10. On which of the following points would the authors of both passages most likely agree?
- A) Computer-savvy children tend to demonstrate better hand-eye coordination than do their parents.
  - B) Those who criticize consumers of electronic media tend to overreact in their criticism.
  - C) Improved visual-spatial skills do not generalize to improved skills in other areas.
  - D) Internet users are unlikely to prefer reading onscreen text to reading actual books.
11. Which choice provides the best evidence that the author of Passage 2 would agree to some extent with the claim attributed to Michael Merzenich in lines 44-49, Passage 1?
- A) Lines 58-61 (“Critics... brain”)
  - B) Lines 62-63 (“Yes... changes”)
  - C) Lines 65-67 (“But... experience”)
  - D) Lines 94-95 (“Media... consumes”)

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### QUESTION 1 - Easy

Choice C is the best answer. The author of Passage 1 indicates that people can benefit from using screen-based technologies as these technologies strengthen “certain cognitive skills” and the “brain functions related to fast-paced problem solving.”

Choice A is incorrect because the author of Passage 1 cites numerous studies of screen-based technologies. Choice B is incorrect because it is not supported by Passage 1, and choice D is incorrect because while the author mentions some benefits to screen-based technologies, he does not encourage their use.

### QUESTION 2 - Medium

Choice A is the best answer. The author of Passage 1 provides evidence that the use of screen-based technologies has some positive effects: “Certain cognitive skills are strengthened by our use of computers and the Net.”

Choices B, C, and D are incorrect because they do not provide the best evidence that the use of screen-based technologies has some positive effects. Choices B, C, and D introduce and describe the author’s reservations about screen-based technologies.

### QUESTION 3 - Easy

Choice B is the best answer. The author of Passage 1 cites Patricia Greenfield’s study, which found that people’s use of screen-based technologies weakened their ability to acquire knowledge, perform “inductive analysis” and “critical thinking,” and be imaginative and reflective. The author of Passage 1 concludes that the use of screen-based technologies interferes with people’s ability to think “deeply.”

Choices A, C, and D are incorrect because the author of Passage 1 does not address how using the Internet affects people’s health, social contacts, or self-confidence.

### QUESTION 4 - Medium

Choice C is the best answer. The author states, “We know that the human brain is highly plastic; neurons and synapses change as circumstances change.” In this context, the brain is “plastic” because it is malleable, or able to change.

Choices A, B, and D are incorrect because in this context “plastic” does not mean creative, artificial, or sculptural.

### QUESTION 5 - Medium

Choice B is the best answer. The author of Passage 2 explains how speed-reading does not “revamp,” or alter, how the brain processes information. He supports this statement by explaining how Woody Allen’s reading of *War and Peace* in one sitting caused him to describe the novel as “about Russia.” Woody Allen was not able to comprehend the “famously long” novel by speed-reading it.

Choices A and D are incorrect because Woody Allen’s description of *War and Peace* does not suggest he disliked Tolstoy’s writing style or that he regretted reading the book. Choice C is incorrect because the anecdote about Woody Allen is unrelated to multitasking.

### QUESTION 6 - Easy

Choice D is the best answer. The author of Passage 2 states that people like novelists and scientists improve in their profession by “immers[ing] themselves in their fields.” Both novelists and scientists, in other words, become absorbed in their areas of expertise.

Choices A and C are incorrect because the author of Passage 2 does not suggest that novelists and scientists both take risks when they pursue knowledge or are curious about other subjects. Choice B is incorrect because the author of Passage 2 states that “accomplished people” don’t perform “intellectual calisthenics,” or exercises that improve their minds.

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### QUESTION 7 - Hard

Choice D is the best answer. The author of Passage 2 criticizes media critics for their alarmist writing: “Media critics write as if the brain takes on the qualities of whatever it consumes, the informational equivalent of ‘you are what you eat.’” The author then compares media critics’ “you are what you eat” mentality to ancient people’s belief that “eating fierce animals made them fierce.” The author uses this analogy to discredit media critics’ belief that consumption of electronic media alters the brain.

Choices A, B, and C are incorrect because the final sentence of Passage 2 does not use ornate language, employ humor, or evoke nostalgia for the past.

### QUESTION 8 - Easy

Choice D is the best answer. The author of Passage 1 argues that online and other screen-based technologies affect people’s abilities to think deeply. The author of Passage 2 argues that the effects of consuming electronic media are less drastic than media critics suggest.

Choices A and B are incorrect because they discuss points made in the passages but not the main purpose of the passages. Choice C is incorrect because neither passage argues in favor of increasing financial support for certain studies.

### QUESTION 9 - Medium

Choice B is the best answer. The author of Passage 1 cites scientific research that suggests online and screen-based technologies have a negative effect on the brain. The author of Passage 2 is critical of the research highlighted in Passage 1: “Critics of new media sometimes use science itself to press their case, citing research that shows how ‘experience can change the brain.’ But cognitive neuroscientists roll their eyes at such talk.”

Choices A, C, and D are incorrect because they do not accurately describe the relationship between the two passages. Passage 1 does not take a clinical approach to the topic. Passage 2 does not take a high-level view of a finding examined in depth in Passage 1, nor does it predict negative reactions to the findings discussed in paragraph 1.

### QUESTION 10 - Medium

Choice C is the best answer. In Passage 1, the author cites psychologist Patricia Greenfield’s finding that “every medium develops some cognitive skills at the expense of others.” In Passage 2, the author states “If you train people to do one thing (recognize shapes, solve math puzzles, find hidden words), they get better at doing that thing, but almost nothing else.” Both authors would agree that an improvement in one cognitive area, such as visual spatial skills, would not result in improved skills in other areas.

Choice A is incorrect because hand-eye coordination is not discussed in Passage 2. Choice B is incorrect because Passage 1 does not suggest that critics of electronic media tend to overreact. Choice D is incorrect because neither passage discusses whether Internet users prefer reading printed texts or digital texts.

### QUESTION 11 - Medium

Choice B is the best answer. In Passage 1, the author cites Michael Merzenich’s claim that when people adapt to a new cultural phenomenon, including the use of a new medium, we end up with a “different brain” (lines 41-43). The author of Passage 2 somewhat agrees with Merzenich’s claim by stating, “Yes, every time we learn a fact or skill the wiring of the brain changes.”

Choices A, C, and D do not provide the best evidence that the author of Passage 2 would agree to some extent with Merzenich’s claim. Choices A and D are incorrect because the claims are attributed to critics of new media.

Choice C is incorrect because it shows that the author of Passage 2 does not completely agree with Merzenich’s claim about brain plasticity.