

READING TEST

35 Minutes—40 Questions

DIRECTIONS: There are several passages in this test. Each passage is accompanied by several questions. After reading a passage, choose the best answer to each question and fill in the corresponding oval on your answer document. You may refer to the passages as often as necessary.

Passage I

PROSE FICTION: This passage is adapted from the novel *The Ground Beneath Her Feet* by Salman Rushdie (©1999 by Salman Rushdie).

Art Deco is an architectural and decorative style that was popular in the first half of the twentieth century.

When you grow up, as I did, in a great city, during what just happens to be its golden age, you think of it as eternal. Always was there, always will be. The grandeur of the metropolis creates the illusion of permanence. The peninsular Bombay into which I was born certainly seemed perennial to me. Malabar and Cumballa hills were our Capitol and Palatine, the Brabourne Stadium was our Colosseum, and as for the glittering Art Deco sweep of Marine Drive, well, that was something not even Rome could boast. I actually grew up believing Art Deco to be the “Bombay style,” a local invention, its name derived, in all probability, from the imperative of the verb “to see.” *Art dekho*. Lo and behold art. (When I began to be familiar with images of New York, I at first felt a sort of anger. The Americans had so much; did they have to possess our “style” as well? But in another, more secret part of my heart, the Art Deco of Manhattan, built on a scale so much grander than our own, only increased America’s allure, made it both familiar and awe-inspiring, our little Bombay writ large.)

In reality that Bombay was almost brand-new when I knew it; what’s more, my parents’ construction firm of Merchant & Merchant had been prominent in its making. In the ten years before my own coming into the world, the city had been a gigantic building site; as if it were in a hurry to become, as if it knew it had to provide itself in finished condition by the time I was able to start paying attention to it . . . No, no, I don’t really think along such solipsistic lines. I’m not over-attached to history, or Bombay. Me, I’m the under-attached type.

But let me confess that, even as a child, I was insanely jealous of the city in which I was raised, because it was my parents’ other love. They loved each other (good), they loved me (very good), and they loved her (not so good). Bombay was my rival. It was on account of their romance with the city that they drew up that weekly rota (list) of shared parental responsibilities. When my mother wasn’t with me—when I was riding on my father’s shoulders, or staring,

with him, at the fish in the Taraporewala Aquarium—she was out there with *her*, with Bombay; out there bringing her into being. (For of course construction work never stops completely, and supervising such work was Ameer’s particular genius. My mother the master builder. Like her father before her.) And when my father handed me over to her, he went off, wearing his local-history hat and a khaki jacket full of pockets, to dig in the foundations of building sites for the secrets of the city’s past, or else sat hatless and coatless at a designing board and dreamed his lo-and-behold dreams.

Maps of the early town afforded my father great joy, and his collection of old photographs of the edifices and *objets* of the vanished city was second to none. In these faded images were resurrected the demolished Fort, the “breakfast bazaar” market outside the Teen Darvaza or Bazaargate, and the humble mutton shops and umbrella hospitals of the poor, as well as the fallen palaces of the great. The early city’s relics filled his imagination as well as his photo albums. It was from my father that I learned of Bombay’s first great photographers, Raja Deen Dayal and A. R. Haseler, whose portraits of the city became my first artistic influences, if only by showing me what I did not want to do. Dayal climbed the Rajabai tower to create his sweeping panoramas of the birth of the city; Haseler went one better and took to the air. Their images were awe-inspiring, unforgettable, but they also inspired in me a desperate need to get back down to ground level. From the heights you see only pinnacles. I yearned for the city streets, the knife grinders, the water carriers, the pavement moneylenders, the peremptory soldiers, the railway hordes, the chess players in the Irani restaurants, the snake-buckled schoolchildren, the beggars, the fishermen, the moviemakers, the dockers, the book sewers, the loom operators, the priests. I yearned for life.

When I said this to my father he showed me photos, still lives of storefronts and piers, and told me I was too young to understand. “See where people lived and worked and shopped,” he clarified, with a rare flash of irritation, “and it becomes plain what they were like.” For all his digging, Vivvy Merchant was content with the surfaces of his world. I, his photographer son, set out to prove him wrong, to show that a camera can see beyond the surface, beyond the trappings of the actual, and penetrate to its flesh and heart.

1. The passage as a whole can primarily be characterized as the narrator's:
 - A. explanation of the relationship the narrator and his parents had with the city of Bombay.
 - B. description of important buildings and locations in Bombay.
 - C. argument for Bombay's prominence in the world of architecture.
 - D. concerns about the emotional environment in which the narrator was raised.
2. The narrator describes the photos by Bombay's first great photographers as primarily inspiring the narrator to:
 - F. turn away from a career in photography.
 - G. create grand panoramas of the new Bombay.
 - H. produce images that his father would add to his collection.
 - J. photograph subjects that depict everyday life on Bombay's streets.
3. In lines 25–31, the narrator muses over, then rejects, the notion that:
 - A. Merchant & Merchant played an important role in the building of Bombay.
 - B. he started paying attention to Bombay at a young age.
 - C. his anticipated birth was one of the causes of the rush to finish the building of Bombay.
 - D. Bombay had been a gigantic building site in the years before he was born.
4. In lines 32–43, the narrator uses which of the following literary devices to describe Bombay?
 - F. Alliteration
 - G. Allusion
 - H. Personification
 - J. Simile
5. Which of the following statements best captures how the narrator's parents balanced their parental duties with their work at the construction company?
 - A. The narrator's mother did the majority of the work at the construction company, while the narrator's father took care of the narrator.
 - B. The narrator's parents traded off responsibility for taking care of the narrator and working at the construction company.
 - C. The narrator's father worked at his designing board, while the narrator's mother took the narrator along to building sites.
 - D. The narrator's parents both worked at the construction company, while the narrator stayed home with a babysitter.
6. As it is used in line 9, the word *sweep* most nearly means:
 - F. overwhelming victory.
 - G. wide-ranging search.
 - H. complete removal.
 - J. broad area.
7. In the context of the passage, the primary function of lines 6–10 is to:
 - A. compare architectural landmarks in Bombay to those elsewhere.
 - B. help illustrate how the term “art deco” was derived.
 - C. contradict the idea that Bombay was in its golden age when the narrator was a child.
 - D. provide examples of “Bombay style” architecture in Rome.
8. The narrator as a child viewed the work his parents did for Merchant & Merchant with a strong sense of:
 - F. joy; the work provided the family with enough money to live extravagant lives.
 - G. fear; the narrator knew his parents were often so exhausted they were careless about safety.
 - H. jealousy; the work pulled the narrator's parents away from him and directed their attention to the city.
 - J. respect; his parents were known for their quality workmanship throughout the city.
9. As it is used in line 38, the phrase *drew up* most nearly means:
 - A. extended.
 - B. prepared.
 - C. approached.
 - D. straightened.
10. In the last paragraph, the narrator's father shows the narrator the photos of storefronts and piers in order to:
 - F. teach the narrator about the commercial progress the people who work in Bombay have made.
 - G. convince the narrator that Dayal and Haseler were Bombay's first great photographers.
 - H. clarify his claim that his photo collection was not about modern-day Bombay but rather about the early twentieth century.
 - J. illustrate that photos of places can reveal as much about the people who spent time there as photos of the people themselves.

Passage II

SOCIAL SCIENCE: This passage is adapted from *Great Waters: An Atlantic Passage* by Deborah Cramer (©2001 by Deborah Cramer).

The Sargasso Sea is a part of the northern Atlantic Ocean.

As the *Cramer* idles through the Sargasso Sea, waiting for the wind to rise, the sea is flat and empty. Nothing demarcates or divides the smooth expanse of water dissolving into the horizon. This vast, unrough-
5 ened surface, this breadth of uniform sea, deceives. But for a few lonely oceanic islands, the unperturbed surface offers no hint of the grand and sweeping energies hidden below.

Only one thousand miles offshore, the *Cramer* has
10 already sailed through some of Atlantic’s deepest waters. Contrary to what one might guess, Atlantic’s deepest waters, like those in other oceans, are along her edges. As we continue east, toward the middle of the sea, the bottom rises. The unmarked plains of the abyss,
15 here flattened by layers of sediment, give way to rising foothills and then to mountains. The first maps of Atlantic seafloor noted, albeit crudely, this rise. Early efforts to plumb Atlantic’s depths proved outrageously inaccurate: one naval officer paid out eight miles (thir-
20 teen kilometers) of hemp rope from a drifting ship and concluded the sea had no bottom. Eventually, sailors more or less successfully calculated depth by heaving overboard cannonballs tied to bailing twine. When they hit bottom, the sailors measured and snipped the twine
25 and then moved on, leaving a trail of lead strung out across the seafloor. These crude soundings, forming the basis of the first map of Atlantic’s basin, published in 1854, identified a prominent rise halfway between Europe and America.

For many years no one could explain why the
30 basin of Atlantic, unlike a bowl, deepened at its edges and shoaled in its center. People assumed that this “Middle Ground,” “Telegraph Plateau,” or “Dolphin Rise,” as it was variously called, was an ancient and
35 drowned land bridge, or a lost continent, but sailors repairing transatlantic telegraph cable unknowingly produced evidence to prove otherwise. Wrestling with the broken cable, they accidentally twisted off a piece of the “plateau” and dredged up a twenty-one-pound
40 (ten-kilogram) chunk of dense black volcanic rock. It was some of the youngest, freshest rock on earth, and it was torn not from a piece of continent sunk beneath the waves, but from the very foundation of the sea.

Today, highly sophisticated sound waves bring the
45 hazy images of those early soundings into sharp focus, revealing that one of the largest and most salient geographic features on the planet lies on the floor of the ocean. Hidden beneath the waves is an immense submerged mountain range, the backbone of the sea. More
50 extensive, rugged, and imposing than the Andes, Rockies, or Himalayas, it covers almost as much of earth’s surface as the dry land of continents. Winding like the seam of a baseball, it circles the planet in a long, sinu-

ous path, running the entire length of Atlantic, slashing
55 the basin neatly in two. Its mountains are stark and black, as black as the sea itself, lit only at their peaks by a thin, patchy covering of white, the skeletal remains of tiny microscopic animals that once lived at the surface. Peaks as high as Mount St. Helens sit in a watery
60 world of blackness, more than a mile below the surface, beyond the reach of light, beyond the sight of sailors.

A great valley, eclipsing any comparable feature on dry land, runs through these mountains. Arizona’s Grand Canyon, one of earth’s most spectacular places,
65 extends for about 280 miles (450 kilometers). A lesser-known canyon of similar depth but considerably greater length lies hidden in the mountains of the ridge. Although offset in many places by breaks in the moun-
70 tains, the rift valley, as the canyon is called, extends the length of Atlantic for 11,000 miles (17,700 kilometers). Here in this bleak and forbidding place, where the water is almost freezing, subterranean fires have lifted mounds of fresh lava onto the seafloor. Scientists visit-
75 ing the rift valley for the first time named the volcanic hills in this otherworldly setting after distant, lifeless planets.

Yet, what had seemed so foreign to scientists is an integral part of earth’s very being, for at the ridge our own planet gives birth. The floor of the rift valley is
80 torn; from the gashes has sprung the seafloor underlying all of Atlantic. Here the youngest, newest pieces are made. Earth is still cooling from her tumultuous birth four and a half billion years ago. Heat, leaking from the molten core and from radioactive decay deep inside the
85 planet, rises toward earth’s surface, powering the volcanoes that deliver the ridge to the sea.

11. The author’s attitude toward the main subject of the passage can best be described as:
- A. awe and fascination.
 - B. disbelief and cynicism.
 - C. amusement and nostalgia.
 - D. boredom and indifference.
12. The passage makes clear that “Middle Ground,” “Telegraph Plateau,” and “Dolphin Rise” were names that people gave to what was actually:
- F. an island in Atlantic.
 - G. a transatlantic telegraph cable.
 - H. an ancient and drowned land bridge.
 - J. the immense mountain range in Atlantic’s basin.

13. In the first paragraph, the author describes the stillness of the Sargasso Sea as the *Cramer* passes through it primarily to emphasize that the stillness:
- A. won't last long, for the sea will become rough when the wind rises.
 - B. makes it easy for a passenger on the *Cramer* to spot oceanic islands that break the water's surface.
 - C. is in dramatic contrast to the power of what exists on and under the seafloor far below.
 - D. makes it seem as if the *Cramer's* wake is dividing the unbroken expanse of water into two.
14. The passage states that compared to Arizona's Grand Canyon, the canyon that lies within the mountains in Atlantic's basin is considerably:
- F. deeper.
 - G. older.
 - H. wider.
 - J. longer.
15. The main purpose of the information in lines 71–76 is to:
- A. describe in detail scientists' expectations for their first trip to the rift valley.
 - B. characterize the rift valley as an alien, seemingly barren place.
 - C. provide statistics about several geographic properties of the rift valley.
 - D. list the names that scientists gave to the volcanic hills in the rift valley.
16. One of the main purposes of the last paragraph is to state that the:
- F. gashes in the rift valley continue to increase in width.
 - G. seafloor of Atlantic has cooled.
 - H. entire Atlantic seafloor has issued from the gashes in the rift valley.
 - J. volcanoes on Earth's dry land have created the newest, youngest pieces of Atlantic seafloor.
17. The author most strongly implies that people commonly assume the deepest waters of an ocean are:
- A. about one thousand miles offshore.
 - B. at the middle of the ocean.
 - C. dotted with islands.
 - D. located in trenches.
18. As it is used in line 19, the phrase *paid out* most nearly means:
- F. dispensed.
 - G. ascertained.
 - H. suggested.
 - J. compensated.
19. According to the passage, the mountain range in Atlantic's basin covers nearly the same amount of Earth's surface as does:
- A. Mount St. Helens.
 - B. the Himalayas.
 - C. the Pacific Ocean.
 - D. the dry land of continents.
20. According to the passage, the white cover on the peaks of the mountains in Atlantic's basin is:
- F. skeletal remains of microscopic animals.
 - G. thin layers of sedimentary volcanic ash.
 - H. patches of ice.
 - J. salt deposits.

Passage III

HUMANITIES: Passage A is adapted from the essay “Just This Side of Byzantium” by Ray Bradbury (©1975 by Ray Bradbury), which is the introduction to a later edition of Bradbury’s 1957 novel *Dandelion Wine*. Passage B is adapted from *Dandelion Wine* (©1957 by Ray Bradbury).

Passage A by Ray Bradbury

I began to learn the nature of surprises, thankfully, when I was fairly young as a writer. Before that, like every beginner, I thought you could beat, pummel, and thrash an idea into existence. Under such treatment, of course, any decent idea folds up its paws, turns on its back, fixes its eyes on eternity, and dies.

It was with great relief, then, that in my early twenties I floundered into a word-association process in which I simply got out of bed each morning, walked to my desk, and put down any word or series of words that happened along in my head.

I would then take arms against the word, or for it, and bring on an assortment of characters to weigh the word and show me its meaning in my own life. An hour or two hours later, to my amazement, a new story would be finished and done. The surprise was total and lovely. I soon found that I would have to work this way for the rest of my life.

First I rummaged my mind for words that could describe my personal nightmares, fears of night and time from my childhood, and shaped stories from these.

Then I took a long look at the green apple trees and the old house I was born in and the house next door where lived my grandparents, and all the lawns of the summers I grew up in, and I began to try words for all that.

I had to send myself back, with words as catalysts, to open the memories out and see what they had to offer.

So from the age of twenty-four to thirty-six hardly a day passed when I didn’t stroll myself across a recollection of my grandparents’ northern Illinois grass, hoping to come across some old half-burnt firecracker, a rusted toy, or a fragment of letter written to myself in some young year hoping to contact the older person I became to remind him of his past, his life, his people, his joys, and his drenching sorrows.

Along the way I came upon and collided, through word-association, with old and true friendships. I borrowed my friend John Huff from my childhood in Arizona and shipped him East to Green Town so that I could say good-bye to him properly.

Along the way, I sat me down to breakfasts, lunches, and dinners with the long dead and much loved.

Thus I fell into surprise. I came on the old and best ways of writing through ignorance and experiment and

was startled when truths leaped out of bushes like quail before gunshot. I blundered into creativity as any child learning to walk and see. I learned to let my senses and my Past tell me all that was somehow true.

Passage B by Ray Bradbury

The facts about John Huff, aged twelve, are simple and soon stated. He could pathfind more trails than anyone since time began, could leap from the sky like a chimpanzee from a vine, could live underwater two minutes and slide fifty yards downstream from where you last saw him. The baseballs you pitched him he hit in the apple trees, knocking down harvests. He ran laughing. He sat easy. He was not a bully. He was kind. He knew the names of all the wild flowers and when the moon would rise and set. He was, in fact, the only god living in the whole of Green Town, Illinois, during the twentieth century that Douglas Spaulding knew of.

And right now he and Douglas were hiking out beyond town on another warm and marble-round day, the sky blue blown-glass reaching high, the creeks bright with mirror waters fanning over white stones. It was a day as perfect as the flame of a candle.

Douglas walked through it thinking it would go on this way forever. The sound of a good friend whistling like an oriole, pegging the softball, as you horse-danced, key-jingled the dusty paths; things were at hand and would remain.

It was such a fine day and then suddenly a cloud crossed the sky, covered the sun, and did not move again.

John Huff had been speaking quietly for several minutes. Now Douglas stopped on the path and looked over at him.

“John, say that again.”

“You heard me the first time, Doug.”

“Did you say you were—going away?”

John took a yellow and green train ticket solemnly from his pocket and they both looked at it.

“Tonight!” said Douglas. “My gosh! Tonight we were going to play Red Light, Green Light and Statues! How come, all of a sudden? You been here in Green Town all my life. You just don’t pick up and leave!”

“It’s my father,” said John. “He’s got a job in Milwaukee. We weren’t sure until today . . .”

They sat under an old oak tree on the side of the hill looking back at town. Out beyond, in sunlight, the town was painted with heat, the windows all gaping. Douglas wanted to run back in there where the town, by its very weight, its houses, their bulk, might enclose and prevent John’s ever getting up and running off.

Questions 21–25 ask about Passage A.

21. When Bradbury claims, “Thus I fell into surprise” (line 46), he’s most nearly referring to the:
- A. discovery that for him the secret to a creative outpouring was to use a word-association method to write fiction.
 - B. long-forgotten experiences he would remember when he would talk with his childhood friends in person.
 - C. realization that he wrote more effectively about his current experiences than about his past.
 - D. several methods other writers taught him to help him write honest, authentic stories.
22. Passage A indicates that Bradbury believes all beginning writers think that they can:
- F. learn the nature of surprises.
 - G. force an idea into creation.
 - H. use one word as a catalyst for a story.
 - J. become a good writer through experiment.
23. Bradbury’s claim “I would then take arms against the word, or for it” (line 12) most strongly suggests that during his writing sessions, Bradbury would:
- A. attempt to find the one word that for him was the key to understanding John Huff.
 - B. often reject a word as not being a catalyst for meaningful writing.
 - C. deliberately choose to write only about a word that inspired his fears.
 - D. feel as though he were struggling to find a word’s significance to him.
24. In the seventh paragraph of Passage A (lines 30–37), Bradbury explains his habit, over many years as a writer, of almost daily:
- F. looking at and writing about objects from his childhood that he had saved.
 - G. wishing he had kept more letters from his childhood to trigger his memories.
 - H. driving past his grandparents’ property, hoping to notice something that would remind him of his past.
 - J. thinking about his grandparents’ property, hoping to remember something that would bring his past into focus.
25. Passage A explains that when writing about the character John Huff, Bradbury had:
- A. placed John in a town in Arizona, where Bradbury himself had grown up.
 - B. included John in stories about a town in Arizona and in stories about Green Town.
 - C. “moved” John to a town other than the town in which the real-life John Huff had grown up.
 - D. “borrowed” John to use as a minor character in many of his stories.

Questions 26 and 27 ask about Passage B.

26. In the first paragraph of Passage B (lines 52–63), the narrator describes John Huff in a manner that:
- F. emphasizes John’s physical strength and intelligence, to indicate John’s view of himself.
 - G. exaggerates John’s characteristics and actions, to reflect Douglas’s idolization of John.
 - H. highlights John’s reckless behavior, to show that Douglas was most fond of John’s rebelliousness.
 - J. showcases John’s talents, to make clear why both children and adults admired John.
27. Within Passage B, the image in lines 74–76 functions figuratively to suggest that:
- A. John’s leaving on a stormy night was fitting, given Douglas’s sadness.
 - B. John’s disappointment about moving was reflected in his mood all day.
 - C. the mood of the day changed dramatically and irreversibly once John shared his news.
 - D. the sky in Green Town became cloudy at the moment John told Douglas he was moving.

Questions 28–30 ask about both passages.

28. Both Passage A and Passage B highlight Bradbury’s use of:
- F. a first person omniscient narrator to tell a story.
 - G. satire and irony to develop characters.
 - H. allegory to present a complex philosophical question.
 - J. sensory details and imaginative description to convey ideas.
29. Based on Bradbury’s description in Passage A of his writing process, which of the following methods hypothetically depicts a way Bradbury might have begun to write the story in Passage B?
- A. Taking notes while interviewing old friends after first deciding to write a story about two boys
 - B. Forming two characters, determining that he would like to tell a story about loss, and then beginning to write a scene
 - C. Writing down the words *train ticket* and then spending an hour writing whatever those words brought to his mind
 - D. Outlining the plot of a story about two boys that would end with one boy leaving on a train

30. Elsewhere in the essay from which Passage A is adapted, Bradbury writes:

Was there a real boy named John Huff?

There was. And that was truly his name. But he didn't go away from me, I went away from him.

How do these statements apply to both the information about Bradbury's approach as a storyteller provided in Passage A and the story of John Huff provided in Passage B?

- F. They reveal that Bradbury believed that to surprise readers is a fiction writer's most important task.
- G. They reinforce that Bradbury used his life experiences to create fiction but also altered those experiences as he pleased.
- H. They prove that Bradbury felt such pain over leaving John that he had to reverse events to be able to write the story.
- J. They indicate that Bradbury rarely used his life experiences to create fiction.

Passage IV

NATURAL SCIENCE: This passage is adapted from the article "The Jaws That Jump" by Adam Summers (©2006 by Natural History Magazine, Inc.).

Recently I was reminded of just how powerful ants can be when inflicting damage on intruders. A team of biomechanists has studied the incredibly speedy bite of a group of Central and South American ants. The team
5 clocked the bite as the fastest on the planet—and discovered that it also gives the ants the unique ability to jump with their jaws, adding to an impressive array of already known defenses.

Trap-jaw ants nest in leaf litter, rather than under-
10 ground or in mounds. There they often feed on well-armored and elusive prey, including other species of ants. As they stalk their dinner, the trap-jaws hold their mandibles wide apart, often cocked open at 180 degrees or more by a latch mechanism. When minute trigger
15 hairs on the inner edge of the mandible come in contact with something, the jaws snap shut at speeds now known to reach 145 miles per hour. No passerby could outpace that. The astoundingly high speed gives the jaws, despite their light weight, enough force to crack
20 open the armor of most prey and get at the tasty meat inside.

The key to the jaws' speed (and their even more amazing acceleration) is that the release comes from stored energy produced by the strong but slow muscles
25 of the jaw. Think how an archer slowly draws an arrow in a bowstring against the flex of a bow: nearly all the energy from the archer's muscles pours into the flexing of the bow. When released, the energy stored in the bow wings the arrow toward its target much faster than the
30 archer could by throwing the arrow like a javelin. The biomechanics of energy storage is the domain of Sheila

N. Patek and Joseph E. Baio, both biomechanists at the University of California, Berkeley. They teamed up with two ant experts, Brian L. Fisher of the California
35 Academy of Sciences in San Francisco and Andrew V. Suarez of the University of Illinois at Urbana-Champaign, to look at the trap-jaw ant *Odontomachus bauri*.

Fisher, Suarez, and other field biologists had
40 already noted that catching *O. bauri* was like grabbing for popping popcorn—and very hot popcorn at that, because a painful sting goes with an ant's trap-jaw bite. The insects bounced around in a dizzying frenzy and propelled themselves many times their body length
45 when biologists or smaller intruders approached them. Patek and Baio made high-speed video images of their movements, and discovered that the secret of their self-propulsion was the well-executed "firing" of their mandibles. They also observed that mandibles started to
50 decelerate before they meet—possibly to avoid self-inflicted damage. Most important, the ants had two distinct modes of aerial locomotion.

In the so-called escape jump, an ant orients its head and jaws perpendicular to the ground, then slams
55 its face straight down. That triggers the cocked mandibles to release with a force 400 times the ant's body weight, launching the insect ten or more body lengths nearly straight into the air. The ant doesn't seem to go in any particular direction, but the jump is
60 presumably fast and unpredictable enough to help the insect evade, say, the probing tongue of a lizard. Not only can the jumping ant gain height and sow confusion, but it may also get to a new vantage point from which to relaunch an attack.

The second kind of jaw-propelled locomotion is even more common than escape jumping. If an intruder enters the ants' nest, one of the ants bangs its jaws against the intruder, which triggers the trap-jaw and propels the interloper (if small enough) in one direc-
70 tion, out of the nest, and the ant in the other. Often the force sends the ant skimming an inch off the ground for nearly a foot. The attack, for obvious reasons, is known as the "bouncer defense." In the wild, gangs of defending ants team up to attack hostile strangers, sending
75 them head over heels out of the nest.

From an evolutionary point of view, the trap-jaws are an intriguing story. The ants clearly evolved an entirely new function, propulsion, for a system that was already useful—chewing up prey. Several lineages of
80 trap-jaw ants have independently hit on the tactic of storing energy in their jaws to penetrate well-defended prey. In *Odontomachus*, the horizontal, bouncer-defense jump could have arisen out of attempts to bite intruders, but the high, escape jump—with jaws aimed
85 directly at the ground—must have arisen from a different, perhaps accidental kind of behavior. Such a serendipitous event would have been a rare instance in which banging one's head against the ground got good results.

31. The primary purpose of the passage is to:
- provide an overview of the mechanics and key operations of the jaws of trap-jaw ants.
 - analyze Patek and Baio's techniques for filming two defensive maneuvers of trap-jaw ants.
 - compare the jaws of *Odontomachus bauri* to the jaws of other species of ants.
 - describe the evolution of the ability of trap-jaw ants to perform an escape jump.
32. The sentence in lines 73–75 and the last sentence of the passage are examples of the author's rhetorical technique of:
- weaving sarcasm into a mostly casual and playful article.
 - interjecting a lighthearted tone into a primarily technical article.
 - integrating a slightly combative tone into an article that mostly praises two scientists' work.
 - incorporating personal anecdotes into an article that mostly reports data.
33. As it is used in lines 81–82, the phrase *well-defended prey* most nearly refers to prey that:
- have a hard outer shell.
 - attack with a lethal bite.
 - travel and attack in groups.
 - move quickly.
34. The passage makes clear that the main source of the speed of the jaws of the trap-jaw ant is the:
- ease of movement of the hinge of the jaw.
 - continuous, steady firing of the jaw's mandibles.
 - light weight of the jaw in relation to the ant's body weight.
 - release of energy stored by muscles of the jaw.
35. The author uses the analogy of trying to grab popcorn as it pops in order to describe the trap-jaw ants' ability to:
- generate heat with their jaw movements.
 - move to high ground in order to attack prey.
 - attack intruders by tossing them out of the nest.
 - bounce around frantically when intruders approach.
36. One main purpose of the last paragraph is to suggest that unlike their bouncer-defense jump, the trap-jaw ants' escape jump may have arisen through:
- the ants' trying and failing to bite intruders.
 - a change in the structure of the mandibles of several lineages of ants.
 - an accidental behavior of the ants.
 - the ants' experiencing a positive outcome when they would attack in a large group.
37. As it is used in line 31, the word *domain* most nearly means:
- living space.
 - area of expertise.
 - taxonomic category.
 - local jurisdiction.
38. The passage points to which of the following as a characteristic of trap-jaw ants' mandibles that prevents the ants from harming themselves with their powerful bite?
- A hinge prevents the mandibles from snapping together forcefully.
 - Mandibles with cushioned inner edges provide a buffer when the mandibles snap shut.
 - A latch mechanism prevents the mandibles from closing completely.
 - The mandibles begin to decelerate before they meet.
39. As described in the passage, one benefit of the trap-jaw ant's escape jump is that it allows an ant to:
- land in position to launch a new attack on a predator.
 - confuse a predator with a quick, sudden sting.
 - signal to other ants using a predictable movement.
 - point itself in whichever direction it chooses to escape.
40. When a trap-jaw ant uses the bouncer-defense jump effectively on an intruder, which creature(s), if any, will be propelled either out of the nest or in another direction?
- The intruder only
 - The attacking ant only
 - The attacking ant and the intruder
 - Neither the attacking ant nor the intruder

END OF TEST 3

STOP! DO NOT TURN THE PAGE UNTIL TOLD TO DO SO.

DO NOT RETURN TO A PREVIOUS TEST.