1 Read the passage below and then answer the questions about it. Choose the most appropriate answers based on what is stated or implied in the passage. Boxes ( ) in the passage indicate missing information.

The two-way interaction between the natural environment and people is a key concept in the study of geography. This interaction provides a strong academic justification for physical geography and human geography remaining together in the same university department. Two major interconnected sub-themes can be identified: first, studying the complex effects of different natural environments on societies and ⟨1⟩their activities; and second, understanding the nature and extent of positive as well as negative human impacts in different environments. Both sub-themes require enough knowledge of the related physical and human geographical patterns and processes [2] in both the natural environment and human society.

Attempts by geographers to conceptualize and theorize how the environment interacts with society have had mixed success. *Environmental Determinism* in the early 20th century described environmental effects as a simple, direct, cause-and-effect link between, for example, climate and human characteristics or the decline of civilizations (Figure 1A). Since then, the complex, indirect, and two-way nature of the environmental relations of society has been recognized and alternative, more advanced models have been proposed, two of which are shown in Figures 1B and 1C.

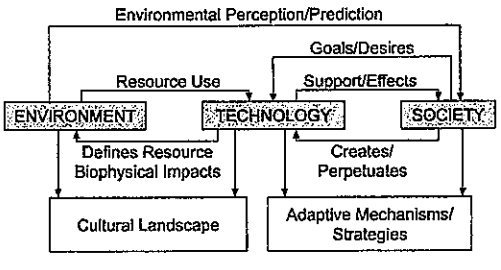
Figure 1A: Environmental Determinism
[9]

Technological Materialism recognizes the important role of technology in bringing about both the way the environment affects society and how society affects the environment. The way people view their environment often reflects the extent [3] the use of resources is possible given the technological aids available to them. In other words, technology can be an enabling factor. The invention of the plow*, for example, enabled farming societies to intensify land use and increase productivity. This in turn led to greater human impacts on soil richness and erosion*. Similarly, almost every technological innovation has the potential to affect human-environment relationships in some way.

Figure 1B: Technological Materialism

In the *Adaptive Systems* model interactions between the environment and society are brought about by many more social, cultural, economic, and political factors. Thus there are many paired relationships with feed-back and feed-forward loops, as indicated by the direction of the arrows between sections in Figure 1C. These features of the model reflect the complexities of the ways environments are perceived and used, and the ability of society to develop adaptive processes and modify their strategies over time. Human adjustment to flood dangers provides a good example. In modern Western societies this, more often than not, takes the form of engineering schemes such as the construction of canals and dams that protect against floods likely to occur again once in a century or two. This solution has been adopted as a result of the interaction of social demands, economic costs, and political pressures. It represents one possible response to flooding —not necessarily the best strategy—that has evolved over time.

Figure 1C: Adaptive Systems



⟨2⟩Geographical work focusing on the effects of the environment on society contributes, for example, to understanding the use of natural resources, and the risks of natural dangers to people. A natural resource includes anything in the natural environment that is capable of use by society, but what is used as a resource in a particular place depends not only on its availability but also on what that society values and chooses to use. Societies in different places or at different times may see resources differently because of different cultural values, levels of technology, or economic or political considerations. The position of wildlife is a good example in this [4]: to some it is regarded as a source of food, such as wild animal meat, whereas to others it must be protected or used in different ways by tourists. The geography of natural resources therefore draws on both the biophysical nature of the resource and many aspects of the associated human environment.

The distinction between renewable and non-renewable resources is important in this context. The former, such as soils, freshwater, forests, and fishing grounds, are restored by biological or environmental processes and may be harvested without limit [5] that they are not overused. However, the use of such resources is increasing at a faster rate than the world's population: since the 1950s, world demand for water has increased by three, catches of fishes have increased by four, and consumption of food has increased by six times more. Technological innovations in agriculture, water supply, forest ⟨3⟩management, and fishing industries have proved capable of both increasing outputs and overusing resources, which can lead to ⟨4⟩exhausting resources and damaging the whole geo-ecosystems. There are often domino effects throughout economic and political systems, as shown by the so-called 'Water Wars' in the Middle East and elsewhere, where upstream removal of water from rivers and groundwater has led to limited downstream supply. Reserves of non-renewable resources, such as fuels, natural gas, and metals, which are in limited supply because of their slow rate of formation by geological processes, may be reduced and completely used up.

*Vocabulary
plow = large farming equipment with one or more blades, often used for digging soil
erosion = 浸食

1. [1] What does ⟨1⟩their refer to? Choose ONE answer.

① natural environment and people ② academic justification ③ physical geography and human geography
④ interconnected sub-themes ⑤ complex effects ⑥ natural environments ⑦ societies

2. Choose the most appropriate answers.

2	① operate	② operates	③ operating	④ is operating	⑤ are operating
3	① that	② which	③ in which	④ of which	⑤ to which
4	① respect	② means	③ procedure	④ comprehension	⑤ biology
5	① so	② such	③ as if	④ concerning	⑤ provided

3. 6 For <2>Geographical work focusing..., find the MAIN VERB of the sentence.

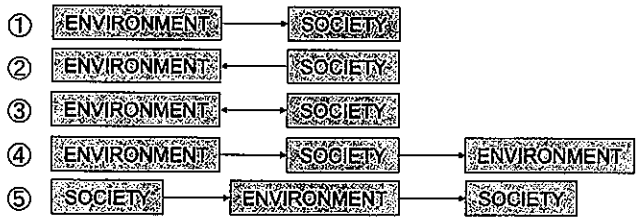
① work ② focusing ③ effects ④ environment ⑤ society ⑥ contributes
⑦ understanding ⑧ use ⑨ resources ⑩ risks ⑪ dangers

4. Identify the most stressed vowel. Then choose ONE word for each that has the same vowel pronunciation.

7 <3>management
8 <4>exhausting

① eat ② kick ③ head ④ add ⑤ cup ⑥ tool ⑦ push ⑧ thought ⑨ gave ⑩ out ⑪ toy ⑫ know

5. 9 According to paragraph 2, which ONE of the following is Figure 1A?



6. 10 - 15 Complete the table by choosing an appropriate summary and example for each model.
NOTE: The examples are NOT in the passage.

Model	Environmental Determinism	Technological Materialism	Adaptive Systems
Summary	10	11	12
Example	13	14	15

① Planting trees and grasses on a beach help reduce sand erosion, but prevent tourists from enjoying the beach.
② Technology changes the way nature affects people and also the way people affect nature.
③ Countries located in hotter climates are less developed than countries with a more variable climate.
④ The invention of the automobile has given people freedom to move great distances quickly, but cars are a major cause of air pollution.
⑤ The natural environment influences human characteristics and behaviors.
⑥ Social, cultural, economic, and political factors play a role in the interaction between nature and humans.

2 Read the passage below and then answer the questions about it. Choose the most appropriate answers based on what is stated or implied in the passage. Boxes ( ) in the passage indicate missing information.

Imagine walking into a truck stop off a deserted stretch of highway at nine o'clock in the evening. You've been driving for six hours. You are tired and still have a long drive ahead of you. You need a bite to eat and want to be out of the car for a bit, so you walk into what appears to be a simple restaurant. It has the usual cracked vinyl-covered booths and plain lighting. The coffee-stained tabletops leave you a bit cautious. Still, you think, "Fine, no one can make a hamburger that badly." You reach for the menu, conveniently stashed behind an empty napkin dispenser, only to discover this is no ordinary cheap restaurant. Instead of the usual hamburgers and chicken sandwiches, you are astonished to see that the menu offers a whole range of fancy, high-quality French dishes.

Food like this would be no surprise in even a small fine-dining restaurant in New York. It is possible that the chef got tired of New York, moved to the middle of nowhere, and now cooks for 16 happens through. Is there a key difference between ordering French food in New York and ordering it at an isolated truck stop? If you encountered such French dishes at the truck stop, would you be brave enough to try them? Suppose the prices were not listed on the menu. What would you be willing to pay for one of those dishes? If you 17 it, would you enjoy it as much as you might if you were eating the same food in New York?

The answers are simple. Atmosphere and expectations add a great deal to our enjoyment. You would expect less in such an environment, and as a consequence you would enjoy the experience at the truck stop less, even if you had the identical food in both places. Likewise, if you knew the food was largely made of standard ingredients rather than high-quality ones, you would enjoy it much less.

A few years ago the <1>folks at the Washington Post were curious about the same basic topic and decided to write an article about it. They decided to use music instead of food. The experimental question was this: Can <2>outstanding art shine through a filter of boring and dull expectation?

Journalist Gene Weingarten asked Joshua Bell, generally considered one of the best violinists in the world, to <3>pose as a street performer and play some of the finest music ever composed at a Metro station in Washington, D.C., during the morning rush hour. Would people notice that this guy was better than most street performers? Would they take a moment to listen? Would they throw a dollar or two his way? Would you?

If you were like 98 percent of the people who passed through L'Enfant Plaza Station that morning, you would have hurried by, not noticing the performance at all. Only 27 out of 1,097 put money into Bell's open Stradivarius violin case and only 7 [18] for more than a minute. Bell played for a little less than an hour and made about $32, which is probably not bad for a basic street performer, but no doubt <4>humbling to a man used to making far, far more for one minute of playing.

Weingarten interviewed a number of people who passed through the station that morning. [①] Of the people who stopped, one recognized Bell from a performance the night before. [②] Another was a serious violinist himself. [③] Another was a Metro worker who, after years of listening to ordinary, even though occasionally talented, street performers, recognized that Bell was better than average. [④] Many didn't even look at Bell. [⑤] When interviewed, some of them said either that they didn't notice the music, or that it sounded like a slightly better than average street performer playing everyday classical music. No one expected a world-class musician to be playing technically extraordinary pieces in a Metro station. Accordingly, and for the most part, they didn't hear one.

Sometime later, I met Joshua Bell and asked him about this experience. In particular, I wanted to know how he felt about being overlooked and ignored by so many people. He responded that he was really not all that surprised, and admitted that expectation is an important part of the way we experience music. Bell told me that it takes an appropriate setting to help people appreciate a live classical music performance—a listener needs to be sitting in a comfortable seat and surrounded by the sound effects of a concert hall. Also, when people put on silk, perfume, and cashmere, they seem to appreciate the costly performance much more.

"What if we did the opposite experiment?" I asked. "What if we put an average player in Carnegie Hall with the Berlin Philharmonic? The expectations would be very high but the quality would not. Would people recognize the difference and would their pleasure be crushed?" Bell thought for a moment. "In this case," he said, "the expectations would triumph over the experience." Furthermore, he said he could think of a few people who were not great violinists but received wild applause because they were in the right environment.

1. Choose the most appropriate answers.

[16]	① who	② whom	③ whoever	④ what	⑤ whether
[17]	① eat	② ate	③ will eat	④ would eat	⑤ have eaten
[18]	① stopped listening		② stopped to listen	③ stopping for listening	
	④ have stopped listening		⑤ were stopped by listening		

2. Choose ONE answer that is closest in meaning.

[19]	<1>folks	① artists	② composers	③ journalists	④ audience	⑤ relatives
[20]	<2>outstanding	① respective	② advanced	③ precious	④ preceding	⑤ distinguished
[21]	<3>pose as	① presume as	② advertise as	③ rest as	④ constitute to be	⑤ pretend to be
[22]	<4>humbling	① embarrassing	② respectful	③ moderate	④ angry	⑤ stimulating

3. [23] The following sentence was taken from the passage. Which location indicated by [①]-[⑤] was it taken from?

[Aside from these few, people did not stop at all.]

4. [24] What does the author mean in stating "this is no ordinary cheap restaurant" in paragraph 1? Choose ONE answer.

① The waiting time at this restaurant is long.
② There is no one to cook a simple dish like a hamburger.
③ The tabletops and napkin dispensers are quite unique.
④ The restaurant appears to be simple but provides refined dishes.
⑤ The hamburgers and sandwiches are too expensive for a small restaurant.

5. [25] In paragraph 2, the author asks, "Is there a key difference between ordering French food in New York and ordering it at an isolated truck stop?" Which ONE of the following represents the author's answer?

① A chef can make better quality food if working in a larger city.
② The price of the food is more important than where the food is served.
③ It is common to find truck stops that serve high quality French food.
④ The environment of a restaurant affects a customer's dining experience.
⑤ If the ingredients are the same, then the taste will be the same.

6. [26] In the last two paragraphs, what reason does Joshua Bell give to explain his experience in the subway station music experiment? Choose ONE answer.

① People's expectations are an important part of music appreciation.
② Professional musicians can play music well in any location.
③ Most people generally do not like classical music.
④ Professional musicians should dress appropriately.
⑤ There are average violinists who play professionally.

3 Read the passage below and then answer the questions about it. Choose the most appropriate answers based on what is stated or implied in the passage. Boxes ( ) in the passage indicate missing information.

On the first day of class, a professor at the University of Florida divided his film photography students into two groups. Everyone on the left side of the classroom, he explained, would be in the "quantity" group. They would be graded <1>solely on the amount of work they produced. On the final day of class, he would count the number of photos <2>submitted by each student. One hundred photos would rate an A, ninety photos a B, eighty photos a C, and so on. Meanwhile, everyone on the right side of the room would be in the "quality" group. They would be graded only on the excellence of their work. They would only need to produce one photo during the semester, but it had to be a nearly perfect image to get an A.

At the end of the term, he was surprised to find that all the best photos were produced by the quantity group. During the semester, these students were busy taking photos, experimenting with composition and lighting, testing out various methods in the darkroom, and learning from their mistakes. In the process of creating hundreds of photos, they perfected their skills. Meanwhile, the quality group sat around <3>wondering about perfection. In the end, they had little to show for <4>their efforts other than unproven theories and one very ordinary photo.

It is easy to get trapped trying to find the ideal plan for change: the fastest way to lose weight, the best program to build muscle, the perfect idea for a side job. We are so focused on figuring out the best approach that we never get around to taking action. As the French philosopher Voltaire once wrote, "The best is the enemy of the good." I refer to this as the difference between being in motion and taking action. The two ideas sound similar, but they are not the same. When you are in motion, you are planning and strategizing and learning. Those are all good things, but they don't produce a result. Action, on the other hand, is the type of behavior that will deliver an outcome. If I outline twenty ideas for articles I want to write, that's motion. If I actually sit down and write an article, that's action. If I search for a better diet plan and read a few books on the topic, that's motion. If I actually eat a healthy meal, that's action.

Sometimes motion is useful, but it will never produce an outcome by itself. It doesn't matter how many times you go talk to the personal trainer, that motion will never get you in shape. Only the action of working out will get the result you are looking to achieve. If motion doesn't lead to results, why do you do it? Sometimes you do it because you actually need to plan or learn more, but more often than not, you do it because motion allows you to feel like [32]. Most people are experts at avoiding criticism. It doesn't feel good to fail or to be judged publicly, so [33]. That's the biggest reason why you slip into motion rather than taking action: you want to delay failure.

It's easy to be in motion and convince yourself that [34]. You think, "I've got conversations going with four potential clients right now. This is good. We are moving in the right direction," or "I brainstormed some ideas for that book I want to write. This is coming together." Motion makes you feel like you are getting things done, but [35]. When preparation becomes an act of delay, you need to change something. You don't want to merely be planning. You want to be practicing. If you want to master a habit, the key is to start with repetition, not perfection. You don't need to map out every feature of a new habit. You just need to practice it.

How long does it actually take to form a new habit?

Habit formation is the process by which a behavior becomes progressively more automatic through repetition. The more you repeat an activity, the more the structure of your brain changes to become efficient at that activity. Neuroscientists (scientists who study the brain and nerves) call this long-term potentiation, which refers to the strengthening of connections between neurons in the brain based on recent patterns of activity. With each repetition, cell-to-cell signaling improves and the nerve connections tighten. First described by neuropsychologist Donald Hebb in 1949, this phenomenon is commonly known as Hebb's Law: "Neurons that fire together wire together."

Repeating a habit leads to clear physical changes in the brain. In musicians, the part of the brain critical for physical movements like picking a guitar string or pulling a violin bow, is larger than it is in non-musicians. Mathematicians, meanwhile, have increased volume in another part of the brain which plays a key role in computation and calculation. Its size is directly correlated with the amount of time spent in the field; the older and more experienced the mathematician, the greater the increase in volume.

When scientists analyzed the brains of taxi drivers in London, they found that the hippocampus, a region of the brain involved in spatial memory, was <5>significantly larger in their subjects than in non-taxi drivers. Even more fascinating, the hippocampus decreased in size when a driver retired. Like the muscles of the body responding to regular weight training, particular regions of the brain adapt as they are used and decline as they are abandoned.

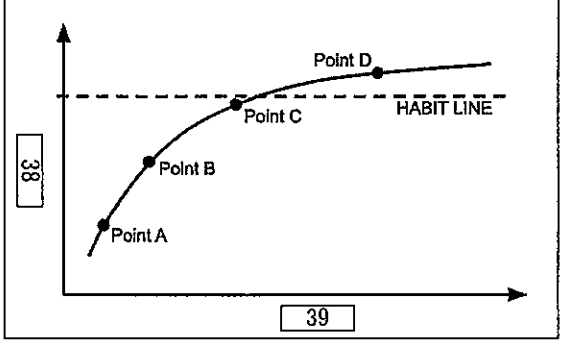
Of course, the importance of repetition in establishing habits was recognized long before neuroscientists began looking into it. In 1860, the English philosopher George H. Lewes noted, "In learning to speak a new language, to play on a musical instrument, or to perform unaccustomed movements, great difficulty is felt because the channels through which each sensation has to pass have not become established, but no sooner has frequent repetition cut a pathway, than this difficulty vanishes. The actions become so automatic that they can be performed while the mind is otherwise engaged." Both common sense and scientific evidence agree: repetition is a form of change.

Each time you repeat an action, you are activating a particular neural circuit associated with that habit. This means that simple repetition is one of the most critical steps you can take in developing a new habit. It is why the students who took tons of photos improved their skills while those who merely theorized about perfect photos did not. One group engaged in active practice, the other in passive learning. One in action, the other in motion.

All habits follow a similar course from effortful practice to automatic behavior, a process known as automaticity. Automaticity is the ability to perform a behavior without thinking about each step, which occurs when the nonconscious mind takes over.

Figure 1 shows what it looks like when researchers track the level of automaticity for an actual habit like going for a walk for ten minutes each day. The shape of the chart, which scientists call a

Figure 1: The Habit Line



learning curve, reveals an important truth about behavior change: habits form based on frequency, not time.

One of the most common questions I hear is, "How long does it take to build a new habit?" However, what people really should be asking is, "How many repetitions does it take to make a habit automatic?" There is nothing magical about time passing with regard to habit formation. It doesn't matter if it's been twenty-one days or thirty days or three hundred days. What matters is the rate at which you perform the behavior. You could do something twice in thirty days, or two hundred times. It's the frequency that makes the difference. Your current habits have been internalized over the course of hundreds, if not thousands, of repetitions. New habits require the same level of frequency. You need to string together enough successful attempts until the behavior is firmly fixed in your mind and you cross the Habit Line as shown in Figure 1. In practice, it doesn't really matter how long it takes for a habit to become automatic. What matters is that you take the actions you need to take to make progress. Whether an action is fully automatic is of less importance.

1. Choose ONE answer that is closest in meaning.

27	<1>solely	① absolutely	② spiritually	③ clearly	④ accurately	⑤ exclusively
28	<2>submitted	① given out	② consented to	③ turned in	④ declared	⑤ demonstrated
29	<3>wondering	① worrying	② admiring	③ questioning	④ confusing	⑤ devising

2. 30 What does <4>their refer to? Choose ONE answer.

① the best photos ② the quantity group ③ composition and lighting ④ various methods
⑤ learning from their mistakes ⑥ creating hundreds of photos ⑦ skills
⑧ the quality group ⑨ unproven theories ⑩ ordinary photo

3. Which is the most stressed syllable in the following word?

31 <5>significantly sig-nif-i-cant-ly
① ②③④ ⑤

4. 32 – 35 In paragraphs 4 and 5, parts of the sentences are missing. Choose ONE answer for each to complete the sentences.

① you tend to avoid situations where that might happen
② you are really just preparing to get something done
③ you are still making progress
④ you are making progress without running the risk of failure

5. 36 At the beginning of this passage, why does the author write about the photography students at the University of Florida? Choose ONE answer.

① to define the characteristics of a student who can take high quality photographs
② to illustrate the difference between taking action and planning to take action
③ to explain the importance of taking lessons when learning something new
④ to contrast digital photography methods with older film photography methods
⑤ to criticize the common belief that quantity is more important than quality

6. 37 Which TWO of the following are NOT true of the effect that a habit has on physical changes in the brain?

① At least one part of the brain grows bigger by habit repetition.
② Some habits involving physical movement can harm the brain.
③ The longer a person does a habit, the larger the physical change.
④ The part of the brain that becomes larger depends on the type of habit.
⑤ The brain will remain the same size after a person stops doing the habit.

7. For Figure 1, choose the correct axis titles.

38 What is the vertical axis title?
39 What is the horizontal axis title?

① Automaticity ② Time ③ Difficulty ④ Repetitions ⑤ Importance

8. For Figure 1, choose the correct explanations about the points on the line (Point A – Point D).

40 Which explanation matches Point A?
41 Which explanation matches Point B?
42 Which explanation matches Point C?
43 Which explanation matches Point D?

① The behavior can be done more or less without thinking. A new habit has been formed.
② At this point, a habit requires a good deal of effort and concentration to perform.
③ From this point on, the habit becomes less important and it is time to start a new one.
④ After a while, the habit gets easier but still requires some conscious attention.
⑤ With enough practice, the habit becomes more automatic than conscious.

出典

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