

# 平成20年度入学試験問題

## 英 語

### 注 意

- 1 問題冊子は1冊，解答用紙は5枚です。
- 2 すべての解答用紙に受験番号を記入しなさい。
- 3 解答は，すべて解答用紙の指定されたところに書きなさい。
- 4 試験終了後，問題冊子は必ず持ち帰りなさい。

1 次の英文を読んで、下記の問いに日本語で答えなさい。

When Albert Einstein first came into Rothman's Department Store in July 1939, the owner, David Rothman, recognized him immediately. ①News had already spread across this sleepy bayside village far out on Long Island that the strange genius with wild hair considered himself a sailor and had rented a summer cottage overlooking the bay.

The name of his poor-looking, 15-foot sailboat was *Tinef*, which means "worthless" or "junk" in Yiddish, and, according to tales across the bay, it could have equally described Einstein's sailing skills. "You had 30 people around here who'd tell you they rescued Einstein when his boat turned over," said David Rothman's son, Robert, who now runs the store. Robert was 12 that summer when Einstein, then 60, came in and, in his heavy German accent, seemed to be asking whether the store sold sundials.

"So my father took him out back and showed him a sundial," Robert recalled last week in the store. "Einstein said, 'No, no. Sundials,' and pointed at his feet. He was looking for sandals." The only sandals Rothman's stocked were a narrow feminine pair, but they seemed to fit right into Einstein's careless appearance. "I can still see him standing here with that big head of hair," Rothman said. "The hair was very unusual at that time for a man, and he used a white cotton rope for a belt—probably something that came off his sailboat."

Rothman, 80, is one of a handful of people here who still remember Einstein's Long Island summer vacation, which had ②moments of both great importance and great amusement. There was the letter he wrote to President Franklin D. Roosevelt that some believe may have led to the development of the atomic bomb, and then there was the widespread delight among locals over the professor's needing constant rescue after getting lost in town or sailing his boat ashore.

Several doors down from Einstein's cottage, Martha Paul, 82, would spend summers in the house where she now lives full time. She pointed down from her

window to a solitary rock sticking out of the shallow water, where she said the scientist used to sit and stare out to sea. “My Aunt Margaret had his same hairstyle, and once I saw them pass each other while walking on the beach,” Paul recalled. “They looked up and stared at each other as if they were amazed to see the same hairstyle.” “To us, he was just a bad sailor with funny hair and a funny accent,” she added. “People used to look out there and laugh at this strange guy in his sailboat going nowhere.”

In 1939, Einstein was seeking a unified field theory to unite several scientific principles, and perhaps sailing allowed his mind to drift along with his boat. Einstein later wrote to David Rothman that it was his “happiest summer ever,” calling the bay “the most beautiful sailing ground I ever experienced.” “My dad was one of the few Jews in town, and he had educated himself,” said Rothman, who went on to say his father nevertheless could discuss politics, art, boating, music and philosophy with Einstein.

Once Einstein tried to explain his theory of relativity and other principles by sketching them on a scrap of paper. The Rothman family recently sold the scrap to a collector. The family still has numerous Einstein letters, which included news about his boat, his family and his health, and his concerns about World War II. They were all typewritten on Einstein’s personal writing paper and signed with a neat, tight script: “Albert Einstein.” Einstein spent the next summer at Saranac Lake in upstate New York, but he continued to correspond with David Rothman, who ③sent him a new pair of “sundials” year after year.

(注) Yiddish イディッシュ語 (主としてドイツ系ユダヤ人が用いる言語)

sundial 日時計

unified field theory 統一場理論

Jew ユダヤ人

theory of relativity 相対性理論

upstate 州北部の

- (1) 下線部①を日本語にきなさい。
- (2) 下線部②が示す内容を具体的に説明きなさい。
- (3) 下線部③はある出来事に由来しているが、それは何か説明きなさい。
- (4) 文中で Martha Paul が語った、Einstein のヘアースタイルに関するエピソードをまとめきなさい。

2 次のインタビュー記事を読んで、下記の問いに日本語で答えなさい。

Yale professor Paul Anastas is considered the father of green chemistry, a field he defines as “the design of chemical products and processes that reduce or eliminate the use and production of dangerous substances.” He talks about the innovations in this developing field and why chemists have a special responsibility to the environment.

***Many people assume chemists are evil—they inevitably cause pollution. What do you think?***

People don't know we have the option of doing things green. They think that in order to have cars, computers, and other modern conveniences, we have to produce all kinds of poisons. Green chemistry is challenging that myth every day.

***What's really new about it?***

We're touching on something that historically has not been done, which is to design molecules with an eye to the consequences right from the start. If you just try to deal with a particular dangerous outcome—cancer or poisoning or explosions—then you're addressing things separately. If you go back down to the molecular structure, you can address a wide range of issues.

***Give me a few examples of things we're using now, or will be using soon.***

Polylactic acid is a plastic whose molecule is made from potatoes, corn, and other plant sources. A year ago a large discount department store in the U.S. ordered tons of cups, soup containers, food packaging—it's just getting going. There's also supercritical carbon dioxide, that is, CO<sub>2</sub> put under high pressure so that it becomes a fluid—a form in which it does not contribute to greenhouse gas emissions. CO<sub>2</sub> is used in dry cleaning, which up to now has typically used a harmful chemical called PCE.

### ***So why aren't more businesses using these new techniques?***

The replacement cost of machinery is a big part of the problem. Take dry cleaning, for example. CO<sub>2</sub> itself is vastly cheaper than PCE, but a new machine costs somewhere around \$40,000. Most dry cleaners are family-owned shops, and they can't afford to throw away a "perfectly good" machine. There should be some rules to motivate industries to overcome this.

### ***Can green chemistry make economic sense on its own?***

If you're in business, your interest is to make money, so if somebody came up with a green-chemistry solution that made no economic sense, I'd say, "Start over again." The idea is to meet environmental and economic goals at the same time.

### ***How did you get started in this field?***

Ah! I grew up outside Boston, in Quincy, Massachusetts, on a little hill overlooking the most beautiful wetland you've ever seen. And one day when I was 8 or 9 years old, the bulldozers arrived and built banks and insurance companies on it. My father was a biology teacher, and he knew how much this upset me. He said, "If you really care about something, you should learn about it." I decided to pursue chemistry. It is connected to everything we see, feel, hear, and touch.

(注) innovation 画期的な変化    molecule 分子    address 取り扱う  
polylactic acid ポリ乳酸    supercritical carbon dioxide 超臨界二酸化炭素  
emission 排出    PCE パークロロエチレン (塩素系溶剤)    wetland 湿地

- (1) "green chemistry" とは何か, 3行程度で説明しなさい。
- (2) "green chemistry" がなぜビジネスの世界で広く普及していないのか, 具体例をあげて5行程度で説明しなさい。
- (3) Paul Anastas 教授を "green chemistry" の開拓へと導いた出来事について, 5行程度で述べなさい。

3 次の日本文の下線部(1), (2)を英語に直しなさい。

わたしが中学一年生のときの担任だった、中山周三先生は、素晴らしい国語の先生でした。

.....(中略).....

この先生は、『原始林』という短歌雑誌を主宰しゅさいされていたので、わたしたちもときどき短歌をつくらされました。

そのとき、(1)たまたまわたしのつくった作品をみられて、「お前のは、正直に、思うとおりに詠よんでいるところがよろしい」と、とても褒ほめてくれました。

これが凄すごく嬉しくて国語が好きになり、いろいろなものを読み、それを褒められてまた好きになる、という、いわゆる歯車しゅさがいいほうに回転したのです。

いまははっきりいえることは、中山先生に教わったおかげで国語が好きになり、それが小説を書くきっかけになった、ということです。

(2)あのとき、中山先生にお会いしていなければ、まったく別の仕事をしていたかもしれません。

- 5 新聞の「人生相談コーナー」に、読者が次のような悩みごとを相談しています。  
あなたならどのようなアドバイスをしますか。“Helpful Advice”さんに代わって、  
解答欄に10行程度の英語で答えなさい。

Dear Helpful Advice,

My close friend and classmate will graduate from high school next year. His parents insist that he should study at university, but he has no interest in going right now. He wants to take a break for a couple of years and see the world before he goes on to college. He doesn't know what to do and is asking me for advice. What should I tell him?