

第76回 (令和6年2月) 文章入力スピード認定試験 (英語) 問題

Valentine Day comes every year, but not for one boy. This boy never receives any cards or chocolates. The sight of his empty mailbox makes him feel lonely and miserable. Of course, the little girl with red hair, whom he secretly adores, never sends him anything. It is not the difficult reason why she would not. She even does not know he exists. No wonder the boy hates that day.

Although that day is associated with love and romance, the meaning and practices or customs vary from culture to culture. In one big country, for example, couples such as husbands and wives or boys and girls exchange a card, a box of chocolate, or flowers. People in other social relations, like friends in the same class or school, neighbor friends, family members, also exchange such gifts as symbols of their bonds to one another. Almost immediately after the day of the new year, gift shops begin selling cards that express these various human relations. A card designed for a parent to give a child might be read. Even after children grow up and move far away from the parental home, they may still receive cards every year from mother and father that remind them of the love from their parents.

Valentine Day, in one nation, began to be marked on the calendar at the end of the twentieth century. The meaning slightly changed. It is called the day of friends. This day has largely free of romantic signification. People reaffirm their ties of relations between friends by giving one another cards and small gifts. In another country, meanwhile, there is a holiday called a black day. On the same day two months later, young men and women who did not receive any chocolates get together eat noodles in black bean soup at the restaurant to cheer up each other. Black symbolizes sadness and disappointment. As they enjoy their noodles, they give each other hope that they will find love for that day next year.

It is too bad there is no black day all over the world. It sounds like a day that is especially and perfectly suited to the boy appeared in

the first paragraph. He may not be so lucky in love again this year and	2,138
feel sad and disappointed for it. But he also never gives up hope that	2,210
next year his mailbox will be full of cards and chocolates. He may be got	2,285
something from the little girl with red hair.	2,333
Not everyone can explain well how medicines actually work. Scientists	2,405
in the early twentieth century realized that in order for a drug to exert	2,479
its selective action, human cells must have a site for the recognition and	2,554
acceptance of a specific type of medicine. This site of medical action is	2,629
termed a receptor, and medicine receptor interactions have now become the	2,703
focus of research for brand new medicine and are important in clinical	2,774
settings.	2,786
Receptors which are the primary targets of the majority of medicines	2,856
are biological macromolecules that have evolved specifically for	2,921
intercellular communication to maintain life. Basically, the biological	2,994
functions of these receptors are to respond to the own chemical messengers	3,069
of a body, such as hormones or neurotransmitters. When the binding takes	3,143
place, it triggers a series of biochemical and physiological changes known	3,218
as a response.	3,235
Medicines which are connected with receptors and mimic the effects of	3,306
hormones are called agonists. Medicines which bind to the receptors, but	3,380
do not have the unique structural features necessary to activate them, are	3,455
called antagonists. Since antagonists occupy the binding site of the	3,525
receptors, they prevent activation by the agonists.	3,579
Based on their locations, receptors are divided into halves. They are	3,651
laminate and intracellular parts. Membrane organs are located on the cell	3,726
membrane, and those organs are situated in the cytoplasm. They are	3,794
separated into two classes and both are called nuclear receptors. Class	3,867
first nuclear receptors are located in the protoplasm, and after ligands	3,940
bind to them, the near ending ligand complexes migrate into the nucleus and	4,016

bind to deoxyribose nucleic acid, resulting in up or down regulation of	4,088
gene expressions. Class second nuclear receptors are located in the	4,157
nucleus bound to deoxyribose nucleic acid and upon ligand binding, and they	4,233
are activated to regulate the expression of specific genes.	4,295
The electron microscope and x-ray crystallography have allowed their	4,365
receptors to the visualization of stereoscopic or three-dimensional	4,433
structures of receptors and the binding of ligands. The use of these	4,503
instruments has great potential for the design and development of new	4,573
medicines. In addition, software analyzing stereoscopic structures can	4,645
show how strongly a medicine binds its receptor. This affinity of a drug	4,719
to its receptor influences on vivo efficacy of the medication and the	4,789
dosage of the medicine.	4,815
For doctors, nurses, and pharmacists, information about which receptor	4,887
a medicine binds to help them understand the causes of adverse effects of	4,961
the drug. This is because the side effects of a drug can be closely linked	5,037
to its receptor. One example is a multi-acting receptor targeted	5,103
antipsychotic for schizophrenia patients. This medicine blocks several	5,175
different kinds of receptors in the brain. Blocking dopamine and serotonin	5,251
receptors produces favorable effects. However, antagonism, histamine, and	5,326
muscarinic receptors can lead to the events of side effects, drowsiness and	5,402
increase in blood sugar level respectively. The affinity of a medicine to	5,477
its receptor varies among the various medicines for the same disease,	5,547
resulting in differences in how side effects develop. Some patients can be	5,623
at greater risk of these side effects than others. Therefore, knowledge of	5,699
medicine receptor interactions helps medical professionals to choose	5,768
remedies with the least side effects suitable for medical condition of each	5,844
patient.	5,852