

平成 22 年度入学者選抜学力検査問題

外 国 語

英 語

(医 学 部)

注 意 事 項

- 1 試験開始の合図があるまでこの冊子を開いてはいけない。
- 2 問題はⅠからⅣまでである。  
試験開始の合図のあとで問題冊子の頁数(1～8頁)を確認すること。
- 3 解答は必ず解答用紙の所定の欄に記入すること。  
所定の欄以外に記入したものは無効である。
- 4 解答用紙は持ち帰ってはいけない。
- 5 問題冊子は持ち帰ってよい。

(この頁は空白)

I 次の英文を読み、空所( 1 )から( 14 )を補うのに適切な1語を下の語群内の(a)から(n)より選び、記号で答えなさい。なお、( 1 ), ( 5 ), ( 12 )はそれぞれ2ヶ所ずつあり、同じ語が入ります。

The lack of participation of eligible blood donors poses a threat to the lives of many Americans. According to the American Red Cross, in the United States alone someone undergoes a blood transfusion once every three seconds, which amounts to 3,000 gallons of blood every hour, day and night. People who ( 1 ) from donations range from cancer patients to organ transplant patients to surgical patients; even premature infants and trauma\* victims ( 1 ) from donations. The need for blood never takes a vacation and neither should donors.

Let me tell you about Brooke, a three-year-old girl with long, curly blond hair and bright blue eyes. Brooke is a victim of cancer and had major surgery to remove a large tumor\* in her abdomen\*. She has spent approximately half of her life in the hospital receiving chemotherapy\* and other treatments for infections that ( 2 ) from a decrease in her white blood cell count after each session.

According to Texas Children's Hospital, Brooke's treatment will require blood products with a replacement value of 508 units of blood, of which only 250 units have been ( 3 ). She still needs more than 250 units of blood to continue her treatment. If she doesn't receive this blood, she will not live to attend kindergarten, to go to the prom in high school, or to get married — luxuries we all too often take for ( 4 ).

Cases like Brooke's are becoming all too common these days, with only 1 in 20 eligible Americans donating blood and the donor rate dropping steadily at 2 percent annually. These facts are particularly distressing considering that nearly half of us here will receive blood sometime in our lives.

You can now see the magnitude of the problem with the lack of blood donations. Fortunately, it is a problem that can be easily solved. Each and every one of you can be part of the ( 5 ). All you have to do to save priceless lives is to go to the nearest Red Cross and donate your blood.

For those of you who have never donated blood before, the process is so simple and easy. First, you ( 6 ) out a donor information form that asks you questions about your sexual history and health. You will then receive a miniphysical\*. They will take a drop of blood from your finger to measure the percent of red cells in your blood. Then they will take your blood pressure, as well as your temperature and pulse. So not only are you saving lives by donating blood, you are also ( 7 ) on your own.

After your physical, you will be asked from which arm you prefer to donate. Then you will be asked to lie on a donor chair. A staff member will clean your arm and insert a sterile\*, nonreusable\* needle, so there is no ( 8 ) to contract AIDS from donating blood. After a pint of your blood has been taken, which usually takes about 10 minutes, you will be asked to ( 9 ) for 10 to 15 minutes while you enjoy juice and cookies. The process is over, and in eight weeks you can donate again.

Many of you may be scared at the thought of the ( 10 ) pain and needles. I admit I was terrified the first time I gave blood, but then I realized I was scared over ( 11 ). The extent of the pain as they insert the needle is equivalent to someone scratching your arm for a brief second, and while the needle is in your arm, you don't feel a thing. And as I stated before, it is impossible to contract AIDS from donating blood.

Now that you know how easy and safe the ( 5 ) is to the lack of blood donations, let's take a look at just how much ( 12 ) your donations can make. Every unit of blood you donate can help save up to three lives, and the joy you get from helping three people can be increased many times over. You see, you can donate blood six times in a year. Those six donations could help as many as 18 people. Just think, if you donated for 10 years, you could help save the lives of nearly 180 people. Who knows — one of those lives could be that of a friend, a family member, or even your own, since you can now donate in ( 13 ) of your own surgery.

Now that you know what a ( 12 ) just one donation can make, I want to encourage you to take action. I urge you to take a stand and become a regular blood donor. Forty-five minutes out of your day is a small price to pay for the lifetime of satisfaction you receive by knowing you may have saved a life. If you have never donated blood before, pull deep inside yourself to find some ( 14 ) and become a proud wearer of the "I am a first time blood donor" sticker. If you have donated before, think back to the feeling of pride you received from making your donation.

— From Jennifer Conard, *The Ultimate Gift* (2004), 一部改変.

Notes: trauma 外傷 tumor 腫瘍 abdomen 腹部 chemotherapy 化学療法  
 miniphysical 簡単な健康診断 sterile 殺菌した nonreusable 再使用不可能な

語 群				
(a) advance	(b) anticipated	(c) benefit	(d) checking	(e) courage
(f) difference	(g) fill	(h) granted	(i) nothing	(j) replaced
(k) rest	(l) resulted	(m) solution	(n) way	

II 次の英文を読んで下の質問に答えなさい。すべて日本語で解答すること。

The emergency-ward administrator put out a disaster call, notifying the chiefs of all departments of the imminent emergency and its nature. The chiefs in turn arranged for mobilization of all available hospital personnel from other wards. In a matter of minutes, interns\*, residents\*, and senior men began to appear in the EW. The nurses and staff were already clearing patients out of the treatment rooms; the corridors were cleared and supply carts checked. Privately, everyone agreed that it was fortunate the day had been a slow one, for there was practically no <sup>(1)</sup>back-up. Emergency-ward personnel are always concerned about back-up. The emergency ward is geared to treat a new patient every eight minutes, around the clock; the staff is prepared to admit to the hospital one out of every five of these emergency patients, or a new admission every forty minutes. This is a furious pace, but it is standard procedure for the hospital. And although patient flow through the EW is generally smooth, there is almost always a back-up. At any time — and this day was an exception — the emergency ward may have three to ten people in the lobby waiting to be seen; another six to ten in the various treatment rooms; another four or five in the back room waiting for X rays, orthopedic\* examinations, or sutures\* of minor lacerations\*. This is the back-up, and the residents keep an eye on it; when it begins to swell, everyone worries, because there is no way to predict when there will be a six-car automobile crash, or a fire, or some other disaster that will strain the hospital's facilities for emergency care. It is a little like trying to direct traffic without ever knowing when rush hour will occur.

In many ways, the EW is the place where one can see most clearly the work that the hospital performs, in all its positive and negative aspects; the EW is a kind of microcosm\* for the hospital as a whole. Its growth in recent years has been significant. Its patient load has been increasing steadily at a rate of 10 percent per year for nearly a decade. It now treats more than 65,000 patients a year. Half of all hospital admissions come through the emergency ward, and many aspects of hospital life are now arranged around that fact; for example, elective\* admissions in medicine\* and surgery may have to wait as long as twelve weeks for a free bed, because emergency cases receive priority. If an elective patient has, for example, surgically treatable cancer, the delay may be difficult for everyone to accept.

Yet <sup>(2)</sup>the trend is clear. And there is no indication that the hospital has fallen into this role passively; on the contrary, this appears to be <sup>(3)</sup>the logical outcome of many aspects of its evolution.

The evolution of the hospital has been going on for more than two thousand years, beginning with the first system of hospitals about which much is known. These first appeared

in Greece around 350 B.C., taking the form of temples to Aesculapius\*, a deified\* physician who had lived nearly a thousand years earlier. The legendary fate of Aesculapius is ironic, for<sup>(4)</sup> it represents the first statement that good medical care could lead to population problems. According to legend, Aesculapius was so successful as a healer that Hades\* became depopulated\*; Pluto\* complained to Zeus\*, who eliminated Aesculapius with a lightning bolt. The Aesculapian temples were not so much hospitals as religious institutions where patients came on pilgrimages\*, hoping to be cured by a visitation of the gods. Predictably, the most<sup>(5)</sup> common cures were of people suffering from illnesses which had mental causes.

— From Michael Crichton, *Five Patients* (1981), 一部改変.

Notes: intern インターン(初期研修医) resident レジデント(インターンを経験した後, 専門医となるために研修を行っている医師) orthopedic 整形外科の  
suture 縫合 laceration 裂傷 microcosm 縮図 elective 緊急性がない  
medicine 内科 Aesculapius アスクレピオス(医術の神)  
deified 神として崇拝されている Hades 死者の国  
depopulated 人口が激減した Pluto プルートー(死者の国の神)  
Zeus ゼウス(ギリシャ神話の最高神) pilgrimage 巡礼

問 1 下線部(1) back-up の意味を記しなさい。

問 2 下線部(2) the trend が指している内容を記しなさい。

問 3 下線部(3)を和訳しなさい。

問 4 下線部(4)で筆者は The legendary fate of Aesculapius がなぜ ironic であると述べているのか, 具体的に説明しなさい。なお, 解答の冒頭に ironic の意味を日本語で記すこと。

問 5 下線部(5)の内容について筆者はなぜ Predictably と述べているのか, 具体的に説明しなさい。なお, 解答の冒頭に Predictably の意味を日本語で記すこと。

Ⅲ 次の英文を読んで下の質問に答えなさい。すべて日本語で解答すること。

Curved spines, broken hips, and fractured wrists are common and disabling occurrences among the elderly. For example, 25% of women over age 60 have spinal compression\* fractures due to osteoporosis. Although fragile bones with frequent fractures are problems of older people, especially women, the process that weakens bones actually begins early in middle age. Bones get their strength from a structure of flexible protein fibers combined with hard calcium phosphate\* crystals. Throughout life, bone is remodeled by cells that add a little to it and take a little away. Up to the age of 35 or so, the yearly result is a net increase in bulk and strength of bones. After that age, very gradually, more bone is removed than deposited, so that a net loss occurs in both sexes, but at a faster rate in females. At any age a woman has lighter bones than a man of the same weight. For the first 5 or 6 years after menopause\*, she loses bone at a faster rate than usual. These three factors make women particularly vulnerable to fractures in old age.

The commonly occurring form of bone loss is termed *osteoporosis* (bone thinning). Bone protein and calcium are both reduced in this condition. Its cause is not known; indeed, there may not be a single cause. Inadequate calcium and vitamin D in the diet, hormonal changes, insufficient exercise, and possibly reduced exposure to sunlight may all contribute.

After decades of bone loss, fractures can occur very easily. Most commonly, one or more bones of the spine collapse slightly in the forward, weight-bearing part. If enough bones are affected, a curved spine results. Back pain can also become a problem. Broken wrists (often incurred in a fall) are the next most frequent type of fracture. Hip fractures are the third most common and the most serious.

It is important to bear in mind that the process leading to fractures usually begins 30 to 40 years before the first break occurs. It is impossible to repair a condition overnight when it has taken decades to develop.

If treatment once osteoporosis exists is uncertain or inadequate, long-term prevention is even more in doubt. It is very difficult to produce good data on the effects of various strategies 20 or 30 years down the road when it counts—at the time of menopause.<sup>(1)</sup> However, the kinds of prevention tactics usually advised—adequate calcium intake and weight-bearing exercise—are low risk and therefore usually worth doing.

— From W. I. Bennett, S. E. Goldfinger, and G. T. Johnson, *Your Good Health* (1987), 一部  
改変.

Notes: compression 圧迫 calcium phosphate リン酸カルシウム menopause 閉経

問 1 女性が男性に比べ骨粗しょう症にかかりやすい理由を3つ記しなさい。

問 2 骨粗しょう症の原因と考えられているものを4つ記しなさい。

問 3 骨粗しょう症による骨折が起きやすい部位を、頻度の高いものから順に2つ記しなさい。

問 4 下線部(1)を和訳しなさい。

**IV** Much has been said in newspapers and in the electronic media about the lack of respect shown by younger people these days for others, for example, older people, teachers, and shopkeepers. In about 90 words write your opinion about what respect means, who deserves to receive it, and how it should be shown. Also, indicate the number of words you have written at the end of the composition.