2007年度　九州東海大学　一般入学試験問題

英語 I・II(60分) 平成19年2月2日

I 注意事項

1. 試験開始の合図があるまで，この問題冊子の中を見てはいけません。
2. 解答用紙には解答欄以外に次の記入欄があるので，監督者の指示に従ってそれぞれ正しく記入し，マークしなさい。

   ① **氏　名　欄**　氏名を記入しなさい。

   ② **受 験 番 号**　受験番号を記入し，さらにその下のマーク欄にマークしなさい。正しくマークされていない場合は，採点できないことがあります。
3. 試験終了後，問題冊子は持ち帰りなさい。

II 解答上の注意

- 解答は解答用紙の解答欄にマークしなさい。例えば，[10]と表示してある問いに対して③と解答する場合は，次の「例」のように解答番号10の解答欄の③にマークしなさい。

例

	解　答　欄
10	① ② ● ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⓪

I (A) 各組の語において，下線部の発音と同じものを，次の ①〜④ のうちから一つずつ選びなさい。

(1) ass<u>u</u>mption [1]

① ass<u>u</u>re ② hist<u>o</u>rical ③ s<u>u</u>nny ④ n<u>a</u>tural

(2) b<u>are</u> [2]

① ty<u>r</u>ant ② ch<u>eer</u> ③ t<u>ire</u> ④ h<u>eir</u>

(3) pr<u>e</u>judice [3]

① bel<u>ie</u>ve ② pr<u>ea</u>ch ③ prep<u>ai</u>d ④ h<u>ea</u>d

(4) ar<u>ch</u>itecture [4]

① <u>ch</u>aracter ② ar<u>ch</u> ③ <u>ch</u>ance ④ pur<u>ch</u>ase

(5) e<u>x</u>istence [5]

① e<u>x</u>tra ② <u>x</u>ylophone ③ e<u>x</u>ample ④ a<u>x</u>

(B) (1)，(2) の (ア)〜(エ) を並べかえて論理的に一貫した文章を作るとき最も適当な配列を，次の ①〜④ のうちから一つずつ選びなさい。

(1)(ア) At the same time, it will support human and social development in the developing countries, too.

(イ) It is also essential for eliminating terrorism and other causes of instability in the world.

(ウ) Poverty reduction is a key development goal shared by the international community.

(エ) Therefore, Japan will give high priorities to providing assistance to such sectors as education, health care and welfare, water and sanitation and agriculture.

① (ア)–(ウ)–(イ)–(エ) ② (ウ)–(イ)–(エ)–(ア) [6]
③ (イ)–(ウ)–(エ)–(ア) ④ (エ)–(ウ)–(ア)–(イ)

(2)(ア) Then, in 1900, three biologists independently discovered the paper he had published in 1866.

(イ) Mysteriouly, other scientists took little notice of Mendel's work and it was forgotten for the next 35 years.

(ウ) But it was left to Gregor Mendel in the 1860s to show that this was really the case.

(エ) A few 18th- and 19th-century biologists suggested that heritable characters might be passed from generation to generation in the form of discrete hereditary factors.

① (エ)–(イ)–(ア)–(ウ) ② (イ)–(ウ)–(エ)–(ア) [7]
③ (エ)–(ウ)–(イ)–(ア) ④ (ア)–(エ)–(ウ)–(イ)

II (A) 各英文の下線部に最も近い意味をもつ語 (句) を，次の ①〜④ のうちから一つずつ選びなさい。

(1) Hang up the phone and wait, please. 8
① Hold on ② Call up ③ Call back ④ Ring off

(2) It's very rude to break in on others' conversations. 9
① interrupt ② corrupt ③ provoke ④ identify

(3) He has earned no less than $100,000,000 this year. 10
① as many as ② as much as ③ only ④ at most

(4) I talked my father into buying me a car. 11
① dissuaded ② persuaded ③ prevented ④ incorporated

(5) Now that you're a high school student, you must study hard. 12
① Until ② Provided ③ Since ④ Unless

(B) 各英文の空所に入れるのに最も適当な語 (句) を，次の ①〜④ のうちから一つずつ選びなさい。

(1) Bob got off the train and shook ( ) with his friend. 13
① a hand ② the hand ③ hands ④ their hands

(2) When I lived in Tokyo, I ( ) the movie five times. 14
① have seen ② had seen ③ am seeing ④ saw

(3) ( ) as I did in a difficult situation, I couldn't take a break.
① Working ② Work ③ To have worked ④ To work 15

(4) My grandfather, ( ) is usual with him, is taking a walk now.
① who ② as ③ what ④ that 16

(5) ( ) your help, I couldn't have solved the problem. 17
① If there were not for ② Had it not been for
③ If I don't have ④ Do I not have

III 日本文 (1)〜(5) の意味を表す英文になるように，それぞれ与えられた (ア)〜(カ) の語 (句) を並べかえて空所を補うとき，2 番目と 5 番目に該当する記号の組み合わせとして最も適当なものを，次の ①〜④ のうちから一つずつ選びなさい。

(1) 最近，ブログを使って日記をつける人が増えている。

A (　　) (　　) (　　) (　　) (　　) (　　) using a web log these days. 18

(ア) a diary　(イ) growing　(ウ) keep　(エ) number　(オ) of　(カ) people

① (ウ)–(オ)　② (エ)–(カ)　③ (オ)–(イ)　④ (エ)–(ウ)

(2) 教えることは，公的な認可だけでなく長く複雑な訓練を必要とする職業活動だと思われている。

Teaching is supposed (　　) (　　) (　　) (　　) (　　) (　　) official certification. 19

(ア) a professional activity　(イ) as well as　(ウ) long and complicated
(エ) requiring　(オ) to be　(カ) training

① (ア)–(カ)　② (オ)–(エ)　③ (ウ)–(ア)　④ (イ)–(ア)

(3) コップ一杯の水を飲んだら気分がずっと良くなった。

A (　　) (　　) (　　) (　　) (　　) (　　) a lot better.

(ア) feel　(イ) glass　(ウ) made　(エ) me　(オ) of　(カ) water 20

① (イ)–(ア)　② (オ)–(エ)　③ (カ)–(エ)　④ (オ)–(ウ)

(4) このコンピュータはどこか調子が悪いように思える。

There (　　) (　　) (　　) (　　) (　　) (　　) this computer. 21

(ア) be　(イ) seems　(ウ) something　(エ) to　(オ) with　(カ) wrong

① (エ)–(カ)　② (ア)–(オ)　③ (イ)–(カ)　④ (ウ)–(ア)

(5) 彼は，放課後すぐに帰宅させられた。

He (　　) (　　) (　　) (　　) (　　) (　　) school. 22

(ア) go　(イ) home　(ウ) immediately after
(エ) made　(オ) to　(カ) was

① (オ)–(イ)　② (ウ)–(エ)　③ (ア)–(イ)　④ (エ)–(イ)

IV 次の英文を読んで，下の問いに答えなさい。なお，＊のついた語句には注があります。

A device which may pave the way for robotic hands that can *replicate the human sense of touch has been unveiled.

U.S. scientists have created a sensor that can "feel" the *texture of objects to the same degree of sensitivity as a human fingertip. The team says the *tactile sensor could, in the future, aid (a)minimally invasive surgical techniques by giving surgeons a "touch-sensation." The research is reported in the journal *Science*.

"If you look at the current status of these tactile sensors, the frustration has been that the resolution of all these devices is in the range of millimeters, whereas the resolution of a human fingertip is about 40 microns, about half the diameter of a human hair, and this has affected the performance of these devices," explained Professor Ravi Saraf, an engineer from the University of Nebraska in Lincoln, U.S., and a co-author of the paper.

But Professor Saraf and colleague Dr. Vivek Maheshwari, also from the University of Nebraska, were able to (b)attain this high level of sensitivity by creating a very thin film (c)made up of layers of metal and *semiconducting *nanoparticles flanked at the top and bottom by *electrodes.

When the film touches a surface any pressure or stress squeezes the layers of particles together. This causes the current in the film to change and light is emitted from the particles, an effect known as "(d)electroluminescence." The visible light is then detected by a camera.

"The beautiful thing is that we have managed to make the device in such a way that the amount of current change, or light, that you get out is exactly (e)proportional to the stress that you apply," added Professor Saraf.

To demonstrate the high sensitivity of the device, the scientists pressed a U.S. one-cent coin against it. The sensor revealed the wrinkles in President Lincoln's clothing and the letters TY in "liberty."

Professor Saraf said the film, as well as matching the sensitivity of a human fingertip, was also flexible and (f)robust enough to be used repeatedly.

He also said the device could have medical applications.

"The hope is that if you have the resolution close to a human finger in applications like minimal invasive surgery, where the surgeon could actually "touch" while he or she is doing the procedure and tell if the tissue is cancerous or abnormal etc., that would increase the success of these surgeries."

Dr. Richard Crowder, a robotics expert from Southampton University, commented in an accompanying article in the journal: "The development of tactile sensors is one of the key technical challenges in advanced robotics and minimal access

surgery."

"The unique sensor developed by Maheshwari and Saraf could prove to be a key advance in technology, for reasons including relatively simple construction, apparent robustness, and high resolution."

Professor Saraf added that now he would like to see if he could create a device that can detect temperature changes as well as texture, enabling it to closer mimic the sensations human can feel.

(Robot device mimics human touch By Rebecca Morelle, Science reporter, BBC News より抜粋、一部改稿)

［注］*replicate〜：〜を再現する，〜を複製する　　*texture：手触り
*tactile：触覚の　　*semiconducting：半導体の特性をもつ
*nanoparticles：超微粒子　　*electrodes：電極

(1) 下線部 (b)・(c)・(e)・(f) の意味として最も適当なものを，次の ①〜④ のうちから一つずつ選びなさい。

(b) attain　23

① change　② impose　③ achieve　④ participate

(c) made up of　24

① consisting of　② considering　③ breaking into　④ engaged in

(e) proportional　25

① inconsistent　② relative　③ indifferent　④ able

(f) robust　26

① slippery　② easy　③ breakable　④ strong

(2) 下線部 (a) のminimally invasive surgical techniquesの説明として正しいものを，次の ①〜④ のうちから一つ選びなさい。　27

① 熟練した外科医でなくても容易にできる外科手術の技術

② 患部以外を傷つけぬよう，極力切開する範囲を狭くした外科手術の技術

③ 外科手術を最小限の予算で済ませるための技術

④ 最小限の人数の外科医だけでまかなえる外科手術の技術

(3) 下線部 (d) のelectroluminescenceの説明として最も適当なものを，次の ①〜④ のうちから一つ選びなさい。 28

① 金属と半導体の超微粒子の層から成る薄い膜の表面に圧力が加えられた時，膜の中の電流が変化した結果，微粒子から光を発する現象のこと。

② 金属と半導体の超微粒子の層から成る薄い膜の表面に外部から電流を流した時，その電流が膜の中の金属に反応して火花を起こし，明るく光る現象のこと。

③ 金属と半導体の超微粒子の層から成る薄い膜の中で，金属と半導体が化学反応を起こした結果，目に見えない光を発する現象のこと。

④ 金属と半導体の超微粒子の層から成る薄い膜が，暗い場所に一定期間放置されたときに，自ら内部の化学作用によって目に見える光を発する現象のこと。

(4) 本文の内容に合致しないものを，次の ①〜④ のうちから一つ選びなさい。 29

① 微細な人間の触覚をまねることのできる，道路舗装用のロボットの腕が開発された。

② アメリカの学者たちによって，人間の指先と同じくらい敏感に物体の手触りを感じられるセンサーが作られた。

③ 人間の指先は，人間の髪の毛の直径の約半分に相当する 40 ミクロンのものまで感じる取ることができる。

④ 1 セントコインを使った実験の結果，Saraf 教授たちの作ったセンサーは，コインに彫られているリンカーン大統領の衣服のしわまで認識できた。

(5) 本文の内容に合致しないものを，次の ①〜④ のうちから一つ選びなさい。 30

① Saraf 教授たちが開発したセンサーは，人間の指先と同じくらい高い感度を持ち，繰り返し使用できる耐久性があるという利点を持っている。

② Saraf 教授たちによれば，自分たちが開発したセンサーは，医学に応用すれば，外科手術の成功率を高めるのに貢献できる可能性を持っているということだ。

③ Crowder 博士は，Saraf 教授たちの開発したセンサーに対して，技術的な難点を含んだものだという否定的見解を抱いている。

④ Saraf 教授は，今後，人間が感じる感覚により近づけるため，触り心地だけでなく温度も探知できるような装置を開発したいと考えている。

解答例

I (A) (1) ③ (2) ④ (3) ④ (4) ① (5) ③

(1) assumption [əsʌ́m(p)ʃən]
① assure [əʃúər] ② historical [histɔ́ːrikəl/-tɔ́r-]
③ sunny [sʌ́ni] ④ natural [nǽtʃərəl]

(2) bare [beər]
① tyrant [tái(ə)rənt] ② cheer [tʃiər]
③ tire [táiər] ④ heir [eər]

(3) prejudice [prédʒədəs]
① believe [bəliːv] ② preach [priːtʃ]
③ prepaid [prìpéid] ④ head [hed]

(4) architecture [áːrkətèktʃər]
① character [kǽrəktər] ② arch [áːrtʃ]
③ chance [tʃæns/tʃɑːns] ④ purchase [pəːrtʃəs]

(5) existence [igzístəns]
① extra [ékstrə] ② xylophone [záiləfòun/zi-]
③ example [igzǽmp(ə)l/-zɑ́ːm-] ④ ax [æks]

III (1) A growing number of people keep diary using a web log these days.

(2) Teaching is supposed to be a professional activity requiring long and complicated training as well as official certification.

(3) A glass of water made me feel a lot better.

(4) There seems be something wrong with this computer.

(5) He was made to go home immediately after school.

	解答欄									
1	①	②	●	④	⑤	⑥	⑦	⑧	⑨	⓪
2	①	②	③	●	⑤	⑥	⑦	⑧	⑨	⓪
3	①	②	③	●	⑤	⑥	⑦	⑧	⑨	⓪
4	●	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
5	①	②	●	④	⑤	⑥	⑦	⑧	⑨	⓪
6	①	●	③	④	⑤	⑥	⑦	⑧	⑨	⓪
7	①	②	●	④	⑤	⑥	⑦	⑧	⑨	⓪
8	①	②	③	●	⑤	⑥	⑦	⑧	⑨	⓪
9	●	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
10	①	●	③	④	⑤	⑥	⑦	⑧	⑨	⓪
11	①	●	③	④	⑤	⑥	⑦	⑧	⑨	⓪
12	①	②	●	④	⑤	⑥	⑦	⑧	⑨	⓪
13	①	②	●	④	⑤	⑥	⑦	⑧	⑨	⓪
14	①	②	③	●	⑤	⑥	⑦	⑧	⑨	⓪
15	①	●	③	④	⑤	⑥	⑦	⑧	⑨	⓪
16	①	②	●	④	⑤	⑥	⑦	⑧	⑨	⓪
17	①	●	③	④	⑤	⑥	⑦	⑧	⑨	⓪
18	①	②	③	●	⑤	⑥	⑦	⑧	⑨	⓪
19	●	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
20	①	●	③	④	⑤	⑥	⑦	⑧	⑨	⓪

	解答欄									
21	●	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
22	①	②	③	●	⑤	⑥	⑦	⑧	⑨	⓪
23	①	②	●	④	⑤	⑥	⑦	⑧	⑨	⓪
24	●	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
25	①	●	③	④	⑤	⑥	⑦	⑧	⑨	⓪
26	①	②	③	●	⑤	⑥	⑦	⑧	⑨	⓪
27	①	●	③	④	⑤	⑥	⑦	⑧	⑨	⓪
28	●	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
29	●	②	③	④	⑤	⑥	⑦	⑧	⑨	⓪
30	①	②	●	④	⑤	⑥	⑦	⑧	⑨	⓪