

平成24年度 入学試験問題

医学部 (I期)

英語・数学

注意事項

1. 試験時間 平成24年1月27日、午前9時30分から11時50分まで
2. 配付した試験問題(冊子)、解答用紙の種類はつぎのとおりです。
 - (1) 試験問題(冊子、左折り)(表紙・下書き用紙付)
英語
数学(その1、その2)
 - (2) 解答用紙
英語 1枚(上端黄色)(右肩落し)
数学(その1) 1枚(上端茶色)(右肩落し)
" (その2) 1枚(上端茶色)(左肩落し)
3. 下書きが下書き用紙で足りなかったときは、試験問題(冊子)の余白を使用して下さい。
4. 試験開始2時間以後からは退場を許可します。但し、試験終了10分前以降の退場は許可しません。
5. 受験中にやむなく外出(手洗い等)を望むものは挙手し、監督者の指示に従って下さい。
6. 退場の際は、この試験問題(冊子)を一番上にのせ、挙手し監督者の許可を得てから、試験問題(冊子)、受験票および所持品携行の上退場して下さい。
7. 休憩のための退場は認めません。
8. 試験終了のチャイムが鳴ったら、直ちに筆記をやめ、おもてのまま上から解答用紙[英語、数学(その1)、数学(その2)]、試験問題(冊子)の順にそろえて確認して下さい。確認が終わっても、指示があるまでは席を立たないで下さい。
9. 試験問題(冊子)はお持ち帰り下さい。
10. 監督者退場後、試験場で昼食をとることは差支えありません。ゴミ入れは場外に設置してあります。
11. 午後の集合は1時です。

英 語

1 下線部の発音が他と違うものを1つ選び、記号で答えなさい。

1. A. aloud B. amaze C. analysis D. appeal E. atom
2. A. postpone B. prone C. pony D. respond E. spoke
3. A. capsule B. equipment C. cupboard D. stepfather E. tiptoe
4. A. fatigue B. genuine C. gigantic D. logical E. surgeon
5. A. breathhing B. cloth C. growth D. method E. thermometer

2 各文の()の中に入れるのに最も適切な表現を1つ選び、記号で答えなさい。

1. If we continue to burn fossil fuels, the level of carbon dioxide in the air may increase to the point () it will blanket the earth and cause it to warm to a dangerous level.
A. in that B. so that C. where D. how E. to which
2. There are billions of galaxies within range of our telescopes and countless billions ().
A. before it B. far C. right away D. beyond E. in the front
3. Darwin's ideas were very controversial, partly because they were in () with many religious views about the origin of mankind.
A. reference B. conflict C. accordance D. harmony E. negation
4. I have () in the computer industry.
A. year of experience B. years of experience C. year of experiences
D. years of experiences E. a year of experiences
5. Jack has been () efforts to get good grades.
A. doing B. having C. making D. taking E. spending
6. Did you () at the concert last night?
A. enjoy B. get you enjoyed C. enjoy yourself
D. get enjoyable E. do enjoyment
7. The critics picked him () as the outstanding male dancer of the decade.
A. out B. up C. off D. on E. away
8. Some people's teeth are highly () to cold.
A. senseless B. sensible C. sensitive D. sensational E. sensory
9. Ann is smarter than her actions would lead ().
A. you to a belief B. your belief C. it for you to believe
D. you believing E. you to believe
10. She () to them that they should reconsider the decision.
A. persuaded B. suggested C. told D. informed E. reminded

3 各和文を英訳する時、(あ)～(そ)の中に入れるべき英単語をそれぞれ答えなさい。なお、1つのカッコには1つの単語が入ります。また I'm や isn't などの縮約形も1語とみなします。

1. それは難しくてだれにも解けない問題だと分かった。

It (あ) to be (い) a difficult problem that nobody could solve it.

2. 私は脂っこいものは食べないようにしている。

I make (う) (え) rule not to eat fatty foods.

3. 激しい運動は益となるより害になる場合が多い。

Strenuous exercise can often (お) more harm than (か).

4. いつも文句ばかり言うのはやめてくれませんか。いらいらします。

I wish you (き) argue all the time. It (く) on my nerves.

5. 手紙をたくさん書いたが返事がもらえず、もう一度手紙を書く価値があるのかどうか分からない。

(け) written so many letters and not got an answer, I'm not sure it's (こ) writing (さ) one.

6. すまないけど、テレビの音量を少し下げてくださいませんか。仕事に集中できません。

Sorry, but would you please (し) down the TV a little? I'm having trouble (す) on my work.

7. 氷は水よりも密度が低いので、氷山は海面上に浮くのだ。

Ice is less (せ) than water, so icebergs (そ) on the surface of the ocean.

4 次の会話を読んで、(1)～(5)に入れるのに最も適切な表現を選択肢から1つずつ選び、記号で答えなさい。なお、文頭に来る単語も小文字で始めています。

A : Bob, how can you always be so cheerful? It seems like nothing ever (1).

B : Oh, I feel I have so many things to be thankful for. I (2) to get too upset over issues so trivial as computer breakdowns, temperamental bosses and business deals that go sour.

A : Don't you care about your job?

B : (3). But, I care more about my family and my health. You see, six years ago I underwent a successful kidney transplant operation. Ever since then I haven't let little things bother me as much as (4).

A : (5) you had a kidney transplant. You've always seemed so healthy and active.

<選択肢>

1. A. makes you happy

B. leaves you alone

C. gets you down

D. lets you go

E. goes along with you

2. A. have been trying B. have been asked C. was always wondering how
 D. don't want you to E. can't see any reason
3. A. Of course, I do B. No, I don't C. Couldn't be better
 D. So do I E. I do believe I won't
4. A. I am B. they used to C. I don't D. they are E. I have
5. A. I never knew B. It is said C. Let me ask if
 D. It was not that E. I regret to say

5 次の文章を読んで以下の問いに答えなさい。

How tightly are emotions and diseases linked to each other? Can someone actually die from loneliness? Is it really possible to become sick with fear?

When the great French Impressionist painter Renoir* suffered from both severe arthritis* and bouts* of depression, his contemporaries gave only passing thought to the possibility that his two problems might in some way be connected. But today there are so many examples of tie-ins* between the workings of the brain and the reactions of the body — [あ], survivors of wars, earthquakes, and floods who subsequently experience severe physical disabilities, and widows and widowers who become ill themselves soon after their spouses* have died — (①) the question has changed from “are emotions and diseases related?” to “how are the two related?”

These issues and questions are the subjects of Emotions and Disease*, a museum exhibit that examines the evolution of scientific, medical, and public understanding of the links between health and strong emotions like anger, love, stress, and fear. Two powerful and changing variables — the tools of the day and the philosophies of the times — shape and influence understanding of these relations.

In the 18th and 19th centuries, when it became possible to listen to the sounds of the heart with a stethoscope* and look at cells and tissues with microscopes, doctors found they could account for most of the diseases of their patients with concrete examples of changes in ⁽¹⁾anatomy* or physiology — [い], the heart would beat much too rapidly when a patient experienced episodes* of lightheadedness* or breathlessness, and so on. Because they could point to such “evidence,” most doctors were skeptical that emotions could have much to do with disease. ⁽²⁾

But there was always the rare patient who had a serious illness for which [う]. These patients were said to have “functional neuroses*,” problems that in some vague way had to do with their nervous systems.

At the end of the 19th century, the French neurologist Jean-Martin Charcot set his large boxy accordion-sized camera to the study of hysterical patients. Charcot's photographs

captured the “fits” of his patients and thereby demonstrated that hysteria was no different from the organic diseases*: it too was associated with distinguishing symptoms. “The camera did not lie.” Although Charcot’s pictures showed what was happening, they did not come close to explaining why.

Enter* Sigmund Freud and his colleague Josef Breuer. Their approach — “less in looking and more in listening” — was known as psychoanalysis*. It involved intensive probing* over many months, years, or even decades into past events in patients’ lives that may have led to the patients’ current problems. Their slant* was that physical symptoms could have “emotional causes and biographical meanings.”

A landmark book called *Emotions and Bodily Changes* was published in 1935. The author, Helen Flanders Dunbar, was both a doctor and a theologian*, and her book and her ideas — that spiritual, emotional, and physical suffering were inextricably* linked — inaugurated* a new field, psychosomatic medicine*. It applied the Freud-Breuer psychoanalytic approach to medical problems in general and not just to the puzzling neuroses.

Psychosomatic medicine was highly controversial from the start. Some doctors argued that, if seriously ill patients relied too heavily on curing their diseases with positive thoughts, they might jeopardize* their chances of benefiting from established therapies that worked best (②) started early in the course of a disease. Others worried that patients might blame themselves if they could not get well. (③), many patients found that “the power of positive thinking” was strong and that they were helped by relaxation, meditation and similar self-help techniques.

By 1950, psychosomatic illness and medicine were so deeply embedded in popular culture that they had found their way to Broadway. In the musical *Guys and Dolls*, which premiered that year, Adelaide sings, “. . . just from worrying whether the wedding is on or off, a person can develop a cough . . .” Adelaide was suffering from what Hans Selye, a physician in Montreal, had labeled a “stress syndrome.” And she was not alone. ⁽³⁾ Stress seemed to be an increasing fact of life. Selye said that, under certain circumstances, it was right for people and other animals to respond with stress responses to dangerous and frightening stimuli. He identified three stages to the response. The first was the “alarm reaction” during which bodily defenses are mobilized* to the stressful situation; the second was the “stage of resistance” in which the person adapts to the situation that is causing stress, and the third was the “stage of exhaustion” in which the stress response dies out. When a person sees a tiger, for example, there is initial shock but then (④). And when tiger and person no longer share the same turf*, the stress response appropriately ends.

Selye speculated that, [え] — what cartoonist Scott Adams has been capturing in his popular character *Dilbert*. Simply stated, stress never ends, and the stress response remains

stuck in the 'on' position for days, months, even years, tipping the balance away from health toward stress syndromes that can have both physical and emotional components.

Selye's insights and hypotheses came unintentionally from his laboratory experiments with rats. He had not been studying stress at all. He was not adept* at handling the rats and often bungled* an experiment by dropping an animal while he was trying to give it an injection. Over the course of the experimental period, many of Selye's rats developed ulcers*, shrunken immune tissues, enlarged glands* and other physical signs and symptoms that were (⑤) associated with the substances he was injecting. He concluded that the animals' physiologic problems must be "due to the strains of life in his laboratory."

(adapted from Ruthy Levy Guyer. 1997. "Emotions and Disease." National Institute of Health Office of Science Education.)

(注) Renoir ピエール = オーギュスト・ルノアール(フランスの印象派の画家)
arthritis 関節炎 bout 発作 tie-in 関係 spouse 配偶者
Emotions and Disease メリーランド州ベセスダにあるアメリカ国立衛生研究所(National Institutes of Health)の国立医学図書館で1997年4月に行われた展示会の名称
stethoscope 聴診器 anatomy 解剖学的構造・形態 episode 症状の発現
lightheadedness ふらつき感 neuroses (単数 neurosis) 神経症
organic disease 器質性疾患(臓器, 組織の形態的異常にもとづいて生じる病気)
Enter ... (脚本のト書きで) ... 登場 psychoanalysis 精神分析
probing 厳密な調査 slant 見地 theologian 神学者
inextricably 密接に inaugurate 創始する
psychosomatic medicine 心身医学 jeopardize ~を危うくする
mobilize ~を集結する turf 領分 adept 熟達した bungle しくじる
ulcer 潰瘍 gland 腺

1. 本文中の[あ]~[え]それぞれに入れるのに最も適切なものを1つずつ選び、記号で答えなさい。

- A. health is a state of the whole brain and body
- B. the numbers of white cells in the bloodstream would definitely increase in response to infections
- C. in western cultures, people are bombarded with constant noise, constant danger, relentless feelings of powerlessness and hopelessness, and unremitting pressures at home and at work
- D. stressed executives who die of heart attacks during fiery board meetings
- E. no "organic" cause could be found or measured

2. 本文中の(①)～(⑤)に入れるのに最も適切な表現をそれぞれの選択肢から1つずつ選び、記号で答えなさい。

- ①: A. that B. since C. like D. although E. provided
②: A. if B. they C. that had been D. which E. so
③: A. Therefore B. Similarly C. Still D. As it were E. In short
④: A. feed B. foul C. flight D. flow E. free
⑤: A. all the way B. either way C. on the way
 D. in no way E. one way or the other

3. 下線部(1)に最も近い意味の単語を次から1つ選び、記号で答えなさい。

- A. examine B. discover C. explain D. ensure E. expect

4. 下線部(2)を日本語に訳しなさい。

5. 下線部(3)の内容を説明するものとして最も適切なものを1つ選び、記号で答えなさい。

- A. Hans Selye was always with Adelaide and treated her for her stress syndrome.
B. Besides Adelaide, there were some other characters in the musical who were suffering from a stress syndrome.
C. Stress was only one of the problems that Adelaide had.
D. Adelaide was not the only person who was suffering from a stress syndrome.
E. Adelaide was married to a man who helped her cope with stress.

6. 本文の内容に合っているものを3つ選び、記号で答えなさい。

- A. People today do not think seriously about the possibility that Renoir's arthritis and depression might be somehow connected.
B. There are still not enough examples to answer the question "are emotions and diseases related?"
C. The aim of the exhibit, entitled "Emotions and Disease," was to show strong connections between tools and philosophies.
D. Jean-Martin Charcot's pictures explained why hysterical patients displayed distinguishing symptoms.
E. Psychoanalysis concerns only patients' present lives.
F. Psychosomatic medicine makes use of the psychoanalytic approach to deal with medical problems in general.
G. When psychosomatic medicine first appeared, it caused a lot of disagreements.
H. According to Selye, stress responses disappear in the "stage of exhaustion."
I. In order to examine how stress syndromes were caused, Selye conducted laboratory experiments with rats.