令和6年度　入学試験問題

医　学　部　（Ⅰ期）

英　語（必須）
数　学・国　語（選択）

注　意　事　項

1. 試験時間　令和6年2月2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）

国　語（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）
国　語（その1）		1枚（上端紫色）（右肩落し）
〃	（その2）	1枚（上端紫色）（左肩落し）

数学，国語は選択した1教科（受験票に表示されている）が配布されています。

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時間以降は退場を許可します。但し，試験終了10分前からの退場は許可しません。
5. 受験中にやむなく途中退室（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. 休憩のための途中退室は認めません。
7. 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，受験票，試験問題（冊子），下書き用紙および所持品を携行の上，退場して下さい。
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），または，国語（その1），国語（その2），計3枚〕，試験問題（冊子）の順にそろえて確認して下さい。確認が終っても，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）と下書き用紙は持ち帰って下さい。
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 次の各文の(　　)の中に入れるのに最も適切な表現を1つずつ選び，記号で答えなさい。

1. (　　) do you think India's economy will be in 30 years?

A. Why　　B. How　　C. What　　D. When

2. We'll move to Fujiyoshida, (　　) is famous as a gateway to Mount Fuji.

A. that　　B. as　　C. where　　D. which

3. You've worked really hard during the last few weeks. I think you've (　　) a holiday.

A. earned　　B. taken　　C. made　　D. had

4. It is generally said that eating too much is not good for your (　　).

A. network　　B. organization　　C. system　　D. structure

5. My son (　　) than to climb Mount Fuji without doing any preparation.

A. thinks better　　B. learns better　　C. knows better　　D. had better

6. Efficient public transportation systems should be developed if urban congestion (　　).

A. is to be reduced　　B. reduces

C. is reduced　　D. will reduce

7. Mount Fuji looks most beautiful in winter, with its top (　　) with snow.

A. covering　　B. cover　　C. covered　　D. being covering

8. Marco is such a thoughtful guy. He's really (　　).

A. very too kind　　B. very much kind　　C. too much kind　　D. much too kind

9. I (　　) there to be more chairs in the boardroom.

A. asked　　B. believed　　C. got　　D. advised

10. I can't afford a new smartphone, so I'll just have to (　　) my old one for now.

A. dispense with　　B. go without　　C. do without　　D. make do with

11. Anything would be (　　) the outdated method we use now.

A. preferably to　　B. more preferable than

C. preferable to　　D. more preferable to

12. My birthday (　　) on a Tuesday this year.

A. turns　　B. falls　　C. gets　　D. takes

13. Now that the exams have finished, it feels like the world is my (　　).

A. minister　　B. monster　　C. boaster　　D. oyster

14. I have two brothers, Nick and Rob. Nick is (　　).

A. a younger　　B. youngest　　C. the younger　　D. more young

15. The news came (　　) my favorite American movie star is getting married.

A. which　　B. that　　C. how　　D. what

2 下記の英文を読み，質問に答えなさい。但し，[A]と[B]を除く他の段落は本来の順番が入れ替わっています。

[A] Everyone generates a circadian rhythm (*circa*, meaning "around," and *dian*, derivative* of *diam*, meaning "day"). Indeed, every living creature on the planet with a life span of more than several days generates this natural cycle. The internal twenty-four-hour clock within your brain communicates its daily circadian rhythm signal to every other region of your brain and every organ in your body.

[B] Your twenty-four-hour tempo helps to determine when you want to be awake and when you want to be asleep. But it controls other rhythmic patterns, too. These (I) your timed preferences for eating and drinking, your moods and emotions, the amount of urine you produce, your core body temperature, your metabolic rate, and the release of numerous hormones. It is no (II) that the likelihood of breaking an Olympic record has been clearly tied to time of day, being maximal at the natural peak of the human circadian rhythm in the early afternoon. Even the timing of births and deaths demonstrates circadian rhythmicity (III) the marked swings* in key life-dependent metabolic, cardiovascular, temperature, and hormonal processes that this pacemaker controls.

[C] Prior to de Mairan's experiment, many believed that the expanding and retracting behavior of the plant was solely determined by the corresponding rising and setting of the sun. It was a logical assumption: daylight (even on cloudy days) triggered the leaves to open wide, while ensuing darkness instructed the leaves to shut up shop, close for business, and fold away. That assumption was shattered (a) by de Mairan. First, he took the plant and placed it out in the open, exposing it to the signals of light and dark correlated with day and night. As expected, the leaves expanded during the light of day and retracted with the dark of night.

[D] Long before we discovered this biological pacemaker, an ingenious experiment did something utterly remarkable: stopped time — at least, for a plant. It was in 1729 when French geophysicist Jean-Jacques d'Ortous de Mairan discovered the very first evidence that plants generate their own internal time.

[E] It was a revolutionary discovery: de Mairan had shown that a living organism kept its own time, and was not, in fact, slave (b) to the sun's rhythmic commands. Somewhere within the plant was a twenty-four-hour rhythm generator that could track time without any cues from the outside world, such as daylight. The plant didn't just have a circadian rhythm, it had an "endogenous," or self-generated, rhythm. It is much like your heart drumming out

its own self-generating beat. The difference is simply that your heart's pacemaker rhythm is far faster, usually beating at least once a second, rather than once every twenty-four-hour period like the circadian clock. Surprisingly, it took another two hundred years to prove that we humans have a similar, internally generated circadian rhythm.

[F] De Mairan was studying the leaf movements of a species that displayed heliotropism: when a plant's leaves or flowers track the trajectory* of the sun as it moves across the sky during the day. De Mairan was intrigued (c) by one plant in particular, called *Mimosa pudica*. Not only do the leaves of this plant trace the arching daytime passage of the sun across the sky's face, but at night, they collapse down, almost as though they had wilted. Then, at the start of the following day, the leaves pop open once again like an umbrella, healthy as ever. This behavior repeats each and every morning and evening, and it caused the famous evolutionary biologist Charles Darwin to call them "sleeping leaves."

[G] Then came the genius twist. De Mairan placed the plant in a sealed box for the next twenty-four-hour period, plunging (d) it into total dark for both day and night. During these twenty-four hours of blackness, he would occasionally take a peek at the plant in controlled darkness, observing the state of the leaves. Despite being cut off from the influence of light during the day, the plant still behaved as though it were being bathed in sunlight; its leaves were proudly expanded. Then, it retracted its leaves as if on cue at the end of the day, even without the sun's setting signal, and they stayed collapsed throughout the entire night.

NOTES

derivative 派生形(の)

marked swing 顕著な変動

trajectory 軌道

1. [C]から[G]の5つの段落を正しい順番に並べ替えなさい。

2. 空欄(Ⅰ)から(Ⅲ)に入る表現として最も適切なものを各々の選択肢から1つ選び，記号で答えなさい。

空欄(Ⅰ)

A. share

B. respect

C. reflect

D. include

空欄(Ⅱ)

A. evidence

B. reason

C. excuse

D. coincidence

空欄(Ⅲ)

A. in spite of

B. due to

C. in contrast with

D. ahead of

3. 下線部(a)から(d)の単語の本文中の意味に最も近いものを各々の選択肢から1つ選び，記号で答えなさい。

(a) shattered

A. explored

B. validated

C. confirmed

D. falsified

(b) slave

A. obedient

B. hostile

C. indifferent

D. resilient

(c) intrigued

A. surprised

B. fascinated

C. intimidated

D. flattered

(d) plunging

A. adjusting

B. immersing

C. converting

D. dissolving

3 著作権処理許諾が得られなかったため未収録

◇M1(150—8)