平成 31 年度

一般入学試験問題

英語 (60分)

I 注意事項

1　**配布された問題冊子・解答用紙は、試験開始の指示があるまで開かないでください。**

2　ページの脱落や重複、印刷の不鮮明な箇所があった場合には、直ちに監督者に申し出てください。

3　受験番号および解答は必ず解答用紙の所定の欄に記入してください。

4　この問題冊子の余白等は適宜利用してもかまいません。

5　質問、中途退室など用件のある場合は、手を挙げて申し出てください。

6　退室時は、問題冊子は閉じ、解答用紙は裏返しにしてください。

7　試験に関わるすべての用紙は、持ち帰ることはできません。

II 解答上の注意

1　「**解答上の注意**」が、裏表紙に記載してあるので、この問題冊子を裏返して必ず読みなさい。ただし、問題冊子を開いてはいけません。

次の英文を読み、下の問い（問１・問２）に答えよ。

A 2015 meta-analysis of forty-three studies since the early nineties on women's experiences of heart disease concluded that the myth that heart disease is a "man's disease" remains pervasive. The authors wrote: "The women thought physicians treated them ☐ 1 ☐ than men and believed researchers paid little attention to heart disease in women. Women felt their risk factors and symptoms were not taken as ☐ 2 ☐ as men's."

The research backs up these women's perceptions. In a 2008 experiment, just one of many studies documenting gender bias in the diagnosis of heart disease, 128 primary care physicians in the United States, Germany, and the United Kingdom watched videotaped patients, played by actors, presenting with symptoms of heart disease. They were then interviewed about what follow-up questions they would ask the patient, what test they would ☐ 3 ☐ , what diagnosis they felt was most likely, and what, if any, referrals or treatments they'd recommend. The doctors gave the women patients less attention than the men: they asked them fewer questions, were less likely to give them a possible diagnosis of cardiovascular disease, and were less certain about their diagnosis. "Although patients with ☐ 4 ☐ symptoms were presented," the researchers concluded, "primary care doctors' behavior differed by patients' gender in all 3 countries under study. These gender differences suggest that women may be less likely to ☐ 5 ☐ an accurate diagnosis and appropriate treatment than men."

Gender ☐ 6 ☐ persist even when it comes to patients with the same actual calculated risk of the disease according to traditional risk factors for the disease. In 2005, the American Heart Association tested five hundred physicians (three hundred primary care physicians, a hundred ob-gyns, and a hundred cardiologists) on how well they could assess patients' cardiovascular risk and apply the association's new evidence-based prevention guidelines. The study found that, across all three ☐ 7 ☐ , when presented with male and female patients who, on paper, both had an intermediate risk based on

various factors like age, smoking history, family history of heart disease, et cetera, they were more likely to incorrectly judge the women as low risk. Because of this underestimation, they recommended fewer prevention [8] to the women compared to the men. One of the few [9] to that rule: among the patients judged to have an intermediate risk, the women were significantly more likely than the men to be advised to lose weight.

Even women with family histories of heart disease tell of meeting [10] from their health care providers when they attempted to be proactive about monitoring their heart health. A woman in one study asked her doctor for a cholesterol test and was told, "But a young and healthy woman like you can't have raised cholesterol."

(出典　Maya Dusenbery. *Doing Harm: The Truth About How Bad Medicine and Lazy Science Leave Women Dismissed, Misdiagnosed, and Sick*. HarperCollins. Kindle 版, 2018.)（一部改変）

(注)　meta-analysis, メタアナリシス（複数の研究の結果を統合し、より高い見地から分析すること）；　pervasive, 広がっている；　referral, 紹介；cardiovascular, 心臓血管の；　ob-gyn, 産婦人科医；underestimation, 過小評価；　proactive, 積極的な

問1　英文の [1] ～ [5] に入れるのに最も適当なものを、下の①～⑧から選べ。

① differently	② identical	③ more	④ order
⑤ rather	⑥ receive	⑦ seriously	⑧ take

問2　英文の [6] ～ [10] に入れるのに最も適当なものを、下の①～⑧から選べ。

① categories	② correlations	③ decades	④ exceptions
⑤ inequalities	⑥ measures	⑦ resistance	⑧ specialties

第２問 次に与えられた語について、1～3（ 11 ～ 13 ）は下線部の発音が同じものを、4～6（ 14 ～ 16 ）は第１アクセント（第１強勢）の位置が同じものを、それぞれ下の①～④から１つずつ選べ。

1．t<u>u</u>nnel 11
 ① b<u>u</u>lletin ② b<u>u</u>ry ③ j<u>u</u>venile ④ s<u>u</u>btle

2．pr<u>e</u>view 12
 ① fat<u>i</u>gue ② pr<u>e</u>sence ③ thr<u>ea</u>t ④ w<u>o</u>men

3．hypothes<u>e</u>s 13
 ① c<u>ea</u>se ② co<u>s</u>mos ③ increa<u>s</u>e ④ loo<u>s</u>e

4．dis・tress 14
 ① pre・fer ② col・league
 ③ hos・tile ④ pro・tein

5．en・deav・or 15
 ① ad・vo・cate ② con・sti・tute
 ③ de・fi・cient ④ sym・me・try

6．ad・o・les・cent 16
 ① al・ter・na・tive ② Eu・ro・pe・an
 ③ dev・as・tat・ing ④ ir・rel・e・vant

第3問 次の1〜5の文の 　17　 〜 　21　 に入れるのに最も適当なものを、それぞれ下の①〜④から1つずつ選べ。

1．I'm going to leave as soon as my supervisor 　17　 it a day.

　① calls 　　　② makes 　　　③ will call 　　　④ will make

2．Ted and his sisters volunteered to become blood stem cell donors, but 　18　 of them was eligible.

　① all 　　　② either 　　　③ neither 　　　④ none

3．About 20 cyclists are believed 　19　 as a result of blood doping over the past 25 years.

　① died 　　　② have dying 　　　③ to die 　　　④ to have died

4．People should be treated equally, 　20　 race, sex, nationality, ethnicity, language, religion, or any other status.

　① by and large 　　　　　　② contrary to

　③ regardless of 　　　　　　④ so far as to

5．Were it not 　21　 your help, I would not have finished the job on time.

　① with 　　　② under 　　　③ for 　　　④ against

第4問 次の対話文の ⎡ 22 ⎤ ～ ⎡ 24 ⎤ に入れるのに最も適当なものを、それぞ
れ下の①～⑨から1つずつ選べ。

Simon: Hey Mary, could you lend me a hand with this? ⎡ 22 ⎤

Mary: Well, I'm a little pushed for time right now. Do you think we could
       possibly put it off until tomorrow?

Simon: I'm under pressure on this one, Mary. ⎡ 23 ⎤ I have to have it
       done by the end of the day.

Mary: Okay, I'll see what I can do. I can let you have about ten minutes.

Simon: You're amazing. I really can't thank you enough. You're...

Mary: Okay, okay! You're starting to make me blush. ⎡ 24 ⎤

① I had a feeling this was going to be a piece of cake.

② You know he'll bend over backwards to do the right thing.

③ Quit the sweet talk and let's get on with the job at hand.

④ That's not going to be a problem because I have an ace up my sleeve.

⑤ Don't you think it's much ado about nothing?

⑥ Every dog has its day, they say.

⑦ It's a little beyond me, to be honest.

⑧ The boss is breathing down my neck.

⑨ No one wants to be left holding the baby.

第５問 次の問い（問１〜４）のパラグラフ（段落）には、まとまりをよくするために取り除いた方がよい文が一つある。取り除く文として最も適当なものを、それぞれ下線部①〜④のうちから１つ選べ。

問１ ☐25☐

Perhaps you have noticed a desire to eat more when you're tired. This is no coincidence. ①Too little sleep increases concentrations of a hormone that makes you feel hungry while suppressing a companion hormone that otherwise signals food satisfaction. ②Despite being full, you still want to eat more. ③By this stage, you have started to lose many basic brain and body functions. ④It's a proven recipe for weight gain in sleep-deficient adults and children alike.

（出典 Matthew Walker. *Why We Sleep: Unlocking the Power of Sleep and Dreams*. Scribner. Kindle 版, 2017.）（一部改変）

問２ ☐26☐

Doping testing does not end when the Olympic Games do. Antidoping officials can even catch people who doped years ago. ①And it's not just using banned substances that can get an athlete in trouble. ②Because blood samples are kept for years after an athlete competes, scientists can go back and test them when new methods are developed. ③In 2015, for instance, officials went back and tested samples from the last two summer Olympics. These were the 2012 games in London, England, and the 2008 Olympics in Beijing, China. ④The new tests turned up evidence of doping among some athletes who originally had been regarded clean of drugs. Those athletes are now being disciplined. Some have had to return their medals.

（出典 Sarah Zielinski. "Even some Olympic athletes cheat with drugs." *Science News for Students*. August 16, 2016. Retrieved September 12, 2018 from <https://www.sciencenewsforstudents.org/>.）（一部改変）

問3 　27

　　Sea anemones are predators that attach themselves to rocks or coral. There, they sit and wait until a fish swims close enough to attack with its tentacles. When a fish swims by the anemone, its tentacles will shoot out a long poisonous thread. The toxins in this thread paralyze the prey. ①Clownfish are one of the only species that can survive the deadly sting of the sea anemone. ②The big question then becomes whether the clownfish can adapt to high carbon dioxide levels. ③By making the anemone their home, clownfish become immune to its sting. ④These fish will gently touch every part of their bodies to the anemone's tentacles until it no longer affects them. A layer of mucus then forms on the clownfish's body to prevent it from getting stung again.

（出典　"Anemone & clownfish." Retrieved September 12, 2018 from
　　　　<http://www.conservenature.org/>.）（一部改変）

問4 　28

　　Newborn survival is closely linked to a country's income level. High-income countries have an average newborn mortality rate (the number of deaths per thousand live births) of just 3.3. ①In comparison, low-income countries have a newborn mortality rate of 27. ②A country's income level explains only part of the story, however. ③In Kuwait and the United States of America, both high-income countries, the newborn mortality rate is 4. ④These are the two safest countries in which to be born despite scarce financial resources. This is only slightly better than lower-middle-income countries such as Sri Lanka and Ukraine, where the newborn mortality rate is 5.

（出典　UNICEF. *Every Child Alive: The Urgent Need to End Newborn Deaths*. (2018.) Retrieved September 12, 2018 from
　　　　<https://www.unicef.org/>.）（一部改変）

第6問　次の１〜３の文において、それぞれ下の①〜⑦の語句を並べ替えて空所を補い、最も適当な英文を完成させよ。解答は　29　〜　37　に入れるものの番号のみを答えよ。

1．When we always give in to our children's wants, we rob them _____
　　　29 _____ 30 _____ 31 _____ they already have.

　　① find solutions　② what　　　③ the opportunity
　　④ adapting　　　　⑤ to　　　　⑥ of　　　　⑦ by

2．Social media allow people _____ 32 _____ 33
　　_____ 34 _____ to through face-to-face communication.

　　① than　　　　　② to　　　　③ with　　　④ access
　　⑤ compare themselves　　　　⑥ they would have
　　⑦ a much larger number of people

3．As with other types of addiction, _____ 35 _____ 36
　　_____ 37 _____ may or may not be aware.

　　① other disorders of　　　② people most　③ suffer from
　　④ to　　　⑤ gambling also　　　　　　⑥ which they
　　⑦ susceptible

— 11 —

　　　A decade ago, a radiologist in private practice might evaluate from twelve to fifteen thousand cases a year. By one estimate, the workload currently reaches from sixteen to twenty-five thousand cases. Some cases generate only a few images, but others involve hundreds or thousands. Radiologists are expected to look at and analyze images very quickly. In fact, conclusions from first impressions, or "gestalt," are supposed to be the mark of good training. But Dennis Orwig, a radiologist at Marin General Hospital, takes issue with this celebrated form of thinking. He realized that while Ⓐthis often succeeded, many radiologists, including seasoned ones, missed important findings. His concern about gestalt comes not only from his own experience in practice but from studies in the medical literature.

　　　Dr. E. James Potchen at Michigan State University has studied performance in reading chest x-rays. More than one hundred certified radiologists were assessed. These studies at Michigan State used a series of sixty chest x-rays that included duplicates of some of the films. When the radiologists were asked, "Is the film normal?" they disagreed among themselves an average of 20 percent of the time. This is called "interobserver variability." When a single radiologist reread on a later day the same sixty films, he contradicted his earlier analysis from 5 to 10 percent of the time. This is called "intraobserver variability." ⬚ C ⬚

　　　One film of the sixty was of a patient who was missing his left clavicle. Presenting such a chest x-ray was meant to assess performance in noticing what was *not* on the film rather than merely searching for a positive finding — an exercise that points out our natural preference for focusing on positive data and ignoring Ⓑthe negative. Remarkably, 60 percent of the radiologists failed to identify the missing clavicle. When clinical data were added to the exercise, informing the radiologist that the sixty chest x-rays

were obtained as part of an "annual physical examination," which primary care doctors perform in order to screen for serious diseases like lung cancer, 58 percent of the radiologists still missed it and scored the film as normal. However, when they were told that the chest x-rays were obtained as part of a series of studies to find a cancer, then 83 percent of the radiologists identified the missing bone. | D |

One of the most interesting outcomes of Potchen's study using the sixty films was to compare the top twenty radiologists, who had a diagnostic accuracy of nearly 95 percent, with the bottom twenty, who had a diagnostic accuracy of 75 percent. Of most concern was the level of confidence each group had in its analysis. The radiologists who performed poorly were not only inaccurate; they were also very confident that they were right when they were in fact wrong. "Observers' lack of ability to discriminate normal from abnormal films does not necessarily diminish their confidence," Potchen wrote. His study also measured the time it took to read a set of films as an indication of the observer's decisiveness. "All observers have characteristic ways in which they manage the threshold of uncertainty in making decisions. Some people are risk takers, and they are likely to have more false-positive errors." This means that they "overread" the images, calling a normal finding abnormal — a false positive. "Others are risk averse, and they are more likely to have high false-negative rates." This means that their excess caution causes them to classify as normal what is actually diseased — a false negative. "Still others cannot make up their minds, and they will have high ambiguity numbers and more frequently require additional films before reaching conclusions." | E |

Ironically, Potchen pointed out, based on his studies of radiologists, "if you look at a film too long, you increase the risk of hurting the patient." After about thirty-eight seconds, he found, many radiologists begin to "see things that are not there." In essence, they generate false positives and begin to

designate normal structures as abnormal. Potchen believes that this reflects their level of insecurity about what they are observing. | F |

There is ample precedent for both significant intraobserver and interobserver variability beyond the diagnosis of lung cancer. For example, interpretation of chest x-rays used for screening for tuberculosis showed interobserver variability of about 33 percent and intraobserver variability of about 20 percent.

Ehsan Samei of the Advanced Imaging Laboratories at Duke University Medical Center recently summarized results from a variety of radiological procedures: "Currently, the average diagnostic error in interpreting medical images is in the twenty percent to thirty percent range. These errors, being either of the false-negative or false-positive type, have significant impact on patient care." The question then is, how can radiologists improve their performance?

(出典　Jerome Groopman. *How Doctors Think*. Mariner Books, 2008.)（一部改変）
(注)　radiologist, 放射線医師;　seasoned, 経験豊かな;　duplicates, 複写;
　　　variability, 変動・ばらつき;　clavicle, 鎖骨;　decisiveness, 決断力;
　　　threshold, 閾値、境界;　ambiguity, 不明確さ;　designate, 指摘する;
　　　precedent, 前例;　tuberculosis, 結核

問1　本文の内容に合うように、次の１〜５の文の | 38 | 〜 | 42 | に入れるのに最も適当なものを、それぞれ下の①〜④から１つずつ選べ。

1．The underlined part "Ⓐthis" can be paraphrased as | 38 | .
　① a case with only a few images
　② judging from first impressions
　③ taking issue with this celebrated form of thinking
　④ Marin General Hospital

2. If a radiologist's "intraobserver variability" was zero percent, it means
   [39] .

   ① he never agreed with other radiologists

   ② he always agreed with other radiologists

   ③ he never made the same analysis when he read the same film for
   the second time

   ④ he always made the same analysis when he read the same film for
   the second time

3. The underlined part "ⓑthe negative" means [40] .

   ① what is missing

   ② what is obvious

   ③ what is targeted

   ④ what is normal

4. Observers characterized as "risk takers" tend to [41] .

   ① ignore what is abnormal and focus on what is normal

   ② put patients at risk by failing to identify diseased parts

   ③ mistake what is normal for what is abnormal

   ④ take more time to make up their minds

5. According to Ehsan Samei, [42] .

   ① diagnostic errors in interpreting medical images are very rare

   ② false-negative errors do more harm than false-positive errors do

   ③ diagnostic errors of both types have serious consequences on
   patient care

   ④ the bottom twenty to thirty percent of radiologists regularly make
   diagnostic errors

問2　次の1〜5の文について、 43 〜 47 の答えとして最も適当な
ものを、それぞれ下の①〜④から1つずつ選べ。

1．How many images does a radiologist today look at to evaluate a
case? 43
① Sixteen to twenty-five thousand.
② Between one hundred and one thousand.
③ More than sixteen thousand.
④ It depends on the case.

2．What did the study find about the performance of participants when
they were asked to evaluate whether a given image was normal or
not? 44
① They evaluated accurately 20 percent of the time at most.
② They agreed among themselves 80 percent of the time on average.
③ They contradicted the researcher's expectation up to 10 percent of
the time.
④ They performed 5 to 10 percent better when they reread the
images on a later day.

3．What did Potchen find when he compared the top twenty
radiologists with the bottom twenty? 45
① Their level of ability did not always correspond with their level of
confidence.
② The better a radiologist's performance was, the more confident he
was.
③ The top radiologists were so confident of their skill that they
never failed.
④ The bottom radiologists performed better when they were more
confident.

— 16 —

4. Which of the blanks [C] ~ [F] does the following sentence fit best? [46]

This highlighted that a specific clinical cue can substantially improve performance, because the radiologist is systematically searching with attention to a particular condition, rather than relying on a flash impression.

① [C]
② [D]
③ [E]
④ [F]

5. According to the passage, which of the following statements is true? [47]

① In Potchen's study, more than one hundred radiologists were asked to read a series of sixty chest x-rays of a single patient.

② Sixty percent of the radiologists overlooked the missing bone when they were told to look for a cancer.

③ Potchen suggests that taking more time reading a film should improve radiologists' diagnostic accuracy.

④ Studies show that it is possible for radiologists to make some kind of error in interpreting x-rays.

解答上の注意

1　解答はすべて解答用紙の解答番号に対応した解答欄にマークしてください。

　　　| 10 |　と表示のある問いに対して

（例1）　③と解答する場合は、**解答番号**10の③に**マークしてください。**

解答番号	解　　　答　　　欄
1 0	① ② ● ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

（例2）　②と⑦を解答する場合は、**解答番号**10の②と⑦に**マークしてください。**

（複数解答の場合）

解答番号	解　　　答　　　欄
1 0	① ● ③ ④ ⑤ ⑥ ● ⑧ ⑨ ⑩

2　解答用紙に正しく記入・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。特に、解答用紙の**受験番号欄に正しくマークされていない場合は、その科目は0点となります。**