

医学部医学科英語入試問題

下記の注意事項をよく読んで解答してください。

◎注意事項

1. 配付された問題冊子および解答用マークシートに、それぞれ受験番号(4桁)ならびに氏名を漢字で記入し、解答用マークシートの受験番号欄に自分の番号を正しくマークしてください。

(受験番号のマークの仕方)







例

	0	1	2	3	4	5	6	7	8	9
受										
a	●	○	○	○	○	○	○	○	○	○
験										
b	●	○	○	○	○	○	○	○	○	○
番										
c	○	●	○	○	○	○	○	○	○	○
号										
d	○	○	●	○	○	○	○	○	○	○

受験番号

a	b	c	d
0	0	1	2

2. マークには必ずHBの鉛筆を使用し、濃く正しくマークしてください。

記入マーク例： 良い例  悪い例     

3. マークを訂正する場合は、消しゴムで完全に消してください。
4. 所定の記入欄以外には何も記入しないでください。
5. 解答用マークシートを折り曲げたり、汚したりしないでください。
6. 「止め」の合図があったら、問題冊子の上に解答用マークシートを重ねて置いてください。

受験番号

氏 名

〔 I 〕 次の英文を読み、後に続く質問 1 ～13 にもっとも適する答えを選びなさい。

Prostate cancer is a malignancy of the prostate gland, a walnut-sized organ located under the bladder in males. The specific mechanisms that lead to the development of prostate cancer are still unknown, but several risk factors for the disease have been identified. Incidence increases with age — prostate cancer seldom develops before the age of 40 and is chiefly a disease found in men over the age of 65. It is most common in North America and in northwestern Europe but rare in South America, the Near East, and Africa. In the United States, black males, who suffer from the disease 37 percent more often than white males, have the world's highest incidence. A growing body of evidence links diets rich in animal fats with prostate cancer. Dietary differences are believed to explain why the incidence of prostate cancer is 120 times greater in the United States than in China, where fatty foods are not part of the general diet.

Environmental factors, such as workplace exposures to cadmium, have also been associated with increased risk of prostate cancer. Family history plays another important role. Men whose fathers or brothers develop prostate cancer are more likely to develop the disease. Researchers are beginning to identify genetic markers of prostate cancer. For instance, the gene known as hereditary prostate cancer 1 (HPC 1) appears to significantly predispose men to prostate cancer when inherited in a mutated form.

Prostate cancer usually progresses slowly and produces no symptoms in its initial stages. Warning signs may eventually include difficult or painful urination; frequent urination, especially at night; and blood in the urine or semen. Pain in the lower back, pelvis, or upper thighs may signal that prostate cancer cells have spread to the ribs, pelvis, and other bones.

Many doctors perform screening tests for prostate cancer during regular physical exams in order to identify the disease in its earliest — and most curable — stages. Doctors perform a digital rectal examination, in which the physician uses a gloved finger to gently check the smoothness of the rectal lining. If cancer is present, a physician may feel a nodule or other prostate irregularity. Another screening test, called the prostate-specific antigen (PSA) test, measures levels of a protein called prostate-specific antigen in the blood. Prostate cancer cells overproduce this protein, causing an elevation of PSA levels in blood. If screening tests indicate that cancer might be present, a physician will usually perform a biopsy, in which a tissue sample is removed from the prostate and examined under a microscope.

1. The word “malignancy” in line 1 is closest in meaning to
 - (a) invasive growth
 - (b) loss in function
 - (c) metastasis
 - (d) benign tumor

2. The word “dietary” in line 10 is closest in meaning to
 - (a) caloric
 - (b) vitamin
 - (c) nutritional
 - (d) body weight

3. The word “predispose” in line 19 is closest in meaning to
 - (a) increase the incidence of
 - (b) incline in advance
 - (c) temporarily protect
 - (d) accelerate

4. The word “initial” in line 22 is closest in meaning to
- (a) virulent
 - (b) symptomatic
 - (c) terminal
 - (d) beginning
5. The word “digital” in line 28 is closest in meaning to
- (a) numeric
 - (b) associated with the anus
 - (c) computer-assisted
 - (d) relating to the finger
6. The word “elevation” in line 33 is closest in meaning to
- (a) dramatic decrease
 - (b) raised area
 - (c) plateau
 - (d) increase
7. According to the text, prostate cancer
- (a) primarily affects older men and women
 - (b) is infrequent in adults under the age of 40
 - (c) results in a walnut-sized tumor
 - (d) is a cancer of the bladder
8. It can be inferred from the text that the incidence of prostate cancer is highest in
- (a) European-Americans
 - (b) African-Americans
 - (c) Brazilians
 - (d) Italians

9. All of the following are possible causes of prostate cancer EXCEPT
- (a) metal exposure
 - (b) genetics
 - (c) a diet high in animal fats
 - (d) an elevated PSA level
10. According to the text, prostate cancer usually
- (a) causes mutation of the HPC 1 gene
 - (b) results in a decrease in nocturnal urination
 - (c) progresses rapidly
 - (d) has few initial signs
11. According to the text, all of the following tests or examinations can be used to diagnose prostate cancer EXCEPT
- (a) a urine test
 - (b) a digital rectal examination
 - (c) a prostate-specific antigen (PSA) test
 - (d) a tissue biopsy
12. Which of the following is a typical sign of prostate cancer?
- (a) A smooth rectal lining
 - (b) Overproduction of prostate-specific antigen
 - (c) Chest pain
 - (d) The absence of a prostate nodule
13. Which of the following titles best describes this passage?
- (a) The Causes and Diagnosis of Prostate Cancer
 - (b) Prostate Cancer: Causes and Treatment
 - (c) Prostate Cancer: Who is Most at Risk?
 - (d) The Role of Diet in Prostate Cancer

〔Ⅱ〕 次の英文を読み、後続く質問 14～25 にもっとも適する答えを選びなさい。

In vitro fertilization (IVF) is an assisted reproductive technology (ART) in which one or more eggs are fertilized outside a female's body. In human reproduction the process involves stimulation of the growth of multiple eggs by the daily injection of hormone medications. The eggs are recovered by one of two methods: sonographic egg recovery, the more common of the two, which uses ultrasound guidance to retrieve the eggs, or oocytes; or laparoscopic egg recovery, in which retrieval is made through a small incision in the abdomen.

Once the eggs are retrieved, they are placed in a special fluid medium, and then semen that has been washed and incubated is placed with the eggs and left for approximately 18 hours. The eggs are removed, passed into a special growth medium, and then examined about 40 hours later. If the eggs have been fertilized and have developed normally, the embryos are transferred to the woman's (or a surrogate's) uterus. Typically, multiple embryos are transferred to increase the likelihood of pregnancy. If more than four eggs develop into embryos, the donor may have the option of cryopreserving the remaining embryos for thawing and replacement in a later IVF cycle. (Cryopreservation is used to minimize the risk of multiple gestations [twins, triplets, etc.] if more than four embryos are replaced.) Following egg transfer, progesterone injections may be administered daily to the recipient. The probability of viable pregnancy is approximately 20 percent with one IVF cycle.

Similar techniques are also available. In gamete intrafallopian transfer (GIFT), the technique is similar to IVF, but the harvested eggs and sperm are placed directly into the fallopian tubes, with fertilization occurring in the woman's body. In zygote intrafallopian transfer (ZIFT), the procedure is

similar to GIFT, but the beginning-stage embryos (zygotes) are placed directly in the fallopian tubes. With super ovulation uterine capacitation enhancement (SOURCE), the woman receives daily hormone medications to stimulate the growth of multiple eggs. Once the eggs have reached the right stage, intrauterine inseminations are done using the partner's specially treated sperm. Donor oocyte programs are also available in some places; donated eggs are used by women unable to use their own eggs to achieve pregnancy. Assisted reproductive technology is used to retrieve eggs from donors and replace embryos in the recipient.

14. The word “injection” in line 4 is closest in meaning to

- (a) oral consumption
- (b) arousal
- (c) needle administration
- (d) ingestion

15. The word “abdomen” in line 7 is closest in meaning to

- (a) belly
- (b) thorax
- (c) genitals
- (d) uterus

16. The word “medium” in line 8 is closest in meaning to

- (a) container for preservation
- (b) of intermediate temperature
- (c) substance used for microorganism storage
- (d) middle point

17. The word “thawing” in line 16 is closest in meaning to
- (a) cooling
 - (b) separating
 - (c) growing
 - (d) unfreezing
18. The word “intrauterine” in line 30 is closest in meaning to
- (a) near the uterus
 - (b) non-uterine
 - (c) within the uterus
 - (d) outside the uterus
19. The word “recipient” in line 34 is closest in meaning to
- (a) receiver
 - (b) receptacle
 - (c) male partner
 - (d) contributor
20. In vitro fertilization (IVF) is a technique
- (a) for fertilizing eggs inside the female’s body
 - (b) that uses hormones to inhibit fertilization
 - (c) that utilizes only one egg at a time
 - (d) in which eggs are taken from the female’s body
21. According to the text, after the eggs are retrieved they are
- (a) washed
 - (b) combined with sperm
 - (c) incubated alone for about 18 hours
 - (d) transferred to the woman’s uterus

22. According to the text, multiple embryos are used in IVF to
- (a) aid in cryopreservation
 - (b) increase the odds of pregnancy
 - (c) decrease the chance of multiple gestations
 - (d) increase the chance of multiple gestations
23. According to the text, cryopreservation
- (a) improves embryo quality, thus ensuring that embryos are available for later IVF cycles
 - (b) is possible only after proper thawing of the embryos
 - (c) allows donors to use extra embryos for subsequent IVF cycles
 - (d) is only required when fewer than four eggs develop into embryos
24. In gamete intrafallopian transfer (GIFT),
- (a) embryos are placed directly into the fallopian tubes
 - (b) fertilization occurs inside the female's body
 - (c) gestation occurs outside the female's body
 - (d) all the above
25. According to the text, donor oocytes are
- (a) used to retrieve eggs from donors
 - (b) used by women who cannot use their own eggs
 - (c) widely available
 - (d) all the above

〔Ⅲ〕 以下の文をもっとも適当な順序に並べ替えなさい。

26.

- a) In addition to explaining more about how our own brains work, such research could help us in the design of artificial visual systems for robots.
- b) They could recognize our faces for keyless locks, chauffeur us around town, bring us the newspaper or pick up the trash.
- c) Recent studies of how we see black and white have provided insights into how the human visual system analyzes the incoming pattern of light and computes object shades correctly.
- d) Computers are notoriously horrible at the kind of pattern recognition that comes so naturally to people.
- e) If computers could “see” better, they could provide more services.

(a) a—d—b—c—e

(b) b—a—c—d—e

(c) c—b—d—e—a

(d) d—a—c—b—e

(e) e—b—c—d—a

27.

- a) A research team from Zurich is working to counter this eventuality through educational programs.
- b) "Stress has become almost normal in today's business world," one of the researchers observes.
- c) "If someone works 12 hours a day, every day, yet still finds a way to relax, he will very likely have no problem. On the other hand, someone else may find a part-time job extremely stressful and develop burnout syndrome."
- d) When you work, it's only natural to feel some level of stress. However, it would be far better never to fall into the vicious cycle of overwork and inner pressure.
- e) The quantity of stress is a determinant but not a decisive one.
- f) "If you know how to protect yourself against its effects, the risks of burning out are much lower."

(a) a—b—c—d—e—f

(b) b—c—d—e—a—f

(c) c—d—e—a—f—b

(d) d—a—b—f—e—c

(e) e—a—b—f—d—c

28.

- a) Ancient rock formations in Western Australia's Pilbara region are home to the earliest evidence not only of life on Earth, but also of biodiversity.
- b) Examples of such living, growing mats can be found in Shark Bay, also in Western Australia.
- c) That's the conclusion from research on 3.4 billion-year-old layered rock structures called stromatolites.
- d) Other researchers, however, say that the fossil stromatolites were not formed by living organisms, but rather by physical and chemical processes around hydrothermal vents.
- e) Some paleontologists think stromatolites were formed when growing mats of cyanobacteria trapped sediments and eventually fossilized.
- f) Researchers in astrobiology have now concluded that the structures are biological and, more dramatically, that the different shapes of stromatolites suggest that the mats formed a type of reef in which niche specialization existed.

(a) a—b—c—f—e—d

(b) a—c—e—b—d—f

(c) a—d—c—e—f—b

(d) a—e—f—d—b—c

(e) a—f—d—e—c—b

29.

- a) So why not try public transport?
- b) You're visiting a European capital and you'd like to take in some of the sights.
- c) But you're not so keen on shelling out for an expensive tourist bus to be assailed by a loud commentary.
- d) Next time you visit these old capitals, give this idea a thought.
- e) It's cheap, it's fun to sit among the locals, and certain routes are so scenic they could have been set specifically with sightseers in mind.

- | | |
|---------------|---------------|
| (a) a—e—d—c—b | (b) b—c—a—e—d |
| (c) c—a—b—e—d | (d) d—b—a—c—e |
| (e) e—d—a—b—c | |

30.

- a) Stem cells have great potential as a tool for gene therapy because they should divide and give rise to new tissues once transplanted in the body.
- b) Take an artificial chromosome containing the gene to correct a serious disease, put it in a stem cell, and transplant into the body.
- c) Oshimura's team has now proved that the concept works by correcting a genetic defect in mouse stem cells.
- d) That is the future of gene therapy, according to Mitsuo Oshimura of Tottori University in Japan.
- e) This means they might repair organs ravaged by genetic disease as well as acting as a vehicle for corrective genes.

- | | |
|---------------|---------------|
| (a) a—c—d—b—e | (b) b—d—c—a—e |
| (c) c—a—b—d—e | (d) d—a—b—c—e |
| (e) e—a—c—d—b | |

〔Ⅳ〕 次のダイアログを読み、カッコ内のもっとも適する語句を選びなさい。

Doctor: What seems to be 31 (a. wrong b. bad c. ill d. sick) with you?

Yuka: Well, I have a fever, a sore throat and a runny nose.

D: Did you take your temperature?

Y: No, not yet.

D: OK, open your mouth wide... Well, your throat is red.

Y: I think my 32 (a. tonsils b. tonsures c. retinas d. retinues) are swollen.

D: (putting a thermometer under Yuka's tongue) That's right. Well, these are the typical 33 (a. phenomena b. syndromes c. symptoms d. characters) of the flu of this year. Do you have any pain in your joints?

Y: (shaking her head) ...

D: Do you feel any 34 (a. appetite b. hangover c. diarrhea d. nausea)?

Y: Yes, I have thrown up a number of times and I have no appetite at all.

D: (a little later, taking the thermometer out of Yuka's mouth) You have a fever of about 103 degrees. When did it start?

Y: A couple of days ago.

D: All right. I'm going to 35 (a. take b. give c. make d. get) you a prescription for some medicine. You should take it three times a day — before each meal.

〔V〕 次の英文を読み、カッコ内のもっとも適する語句を選びなさい。

An uncanny series of events 36 (a. helped b. rescued c. saved d. relieved) my father's life.

About six weeks before my wedding, my mom and I were having a heated discussion about the color of my wedding dress. Mom wanted me to wear white; I wanted to wear off-white.

We had the discussion at the same place we had many others as I grew up—in the kitchen. Mom sat 37 (a. at b. in c. with d. to) the table. I sat on the floor, cross-legged, leaning up against the refrigerator.

As we further debated the matter, my dad entered the kitchen. He had just finished his shower and had put on his robe. From where I sat, I noticed that he had a black spot, about the size of a dime, on the back of his left calf, just underneath the knee.

I asked Dad how long he had that dark, raised spot. He said he was aware of it, but didn't know how long it had been there. Mom said he called it his beauty mark.

I told Dad he needed to have that mark checked out. I told him about Mel, the man who 38 (a. was used to co-anchor b. had been used to co-anchor c. used to co-anchor d. had used to co-anchor) the evening television news with me in Michigan. His wife had noticed a black spot on the back of his shoulder. That black spot turned out to be melanoma. Skin cancer. Mel's cancer was caught in time. But, 39 (a. if it were not for b. if it had not c. were it not for d. had it not been), it would have spread quickly because the spot was located very close to his lymph nodes.

Dad promised he would have his spot checked out. Mom and I continued to 40 (a. tell b. discuss c. tell about d. discuss about) wedding dresses.

After visiting 41 (a. with b. at c. on d. to) Mom and Dad, I flew back to Boston where I was a consumer reporter for WNAC-TV. One day after work, Dad called to tell me he had had a specialist look at the spot and was sure all was okay. In fact, Dad planned to make his scheduled business trip to Boston in a couple of weeks.

The next call from my parents brought the news 42 (a. which b. about which c. that d. about that) Dad wouldn't be coming to Boston. That wicked beauty mark was melanoma. Doctors explained to us that there are five stages of melanoma. Dad's cancer 43 (a. progresses b. has progressed c. progressed d. had progressed) to level three. He would need surgery to try and combat his disease.

I flew home for Dad's surgery. The doctors made every attempt to go in and remove the cancer. As we waited for the results to see if they were able to get all the cancer, the minutes seemed like hours, the hours like days, the days like weeks.

We knew that a level three melanoma had the potential to spread like wildfire. Not a good sign. We counted the days waiting for the results. Five days passed. The results 44 (a. come b. have come c. came d. had come). His cancer was caught in time!

Dad had a hard time walking after his surgery, which 45 (a. took place b. broke out c. performed d. went) three weeks before my wedding. He kept saying his main goal now was to be able to escort his little girl down the aisle. Dad's leg just wouldn't support his weight. At the wedding, Mom and I met Dad halfway down the aisle, where he waited for us in his wheelchair. Mom and I supported Dad as he haltingly walked between us. As we approached the altar, a friend met Dad with his wheelchair. Dad achieved his goal — he walked me down the aisle.

Since 1981 my father's body has remained cancer-free. He is checked annually. He is still vital, alive and well.

I have always remained firmly convinced that Mom and I 46 (a. mean
b. are meant c. meant d. were meant) to have that heated discussion
mentioned earlier. It allowed me to be positioned to see Dad's melanoma,
which 47 (a. in turn b. in contrast c. in reality d. in practice)
allowed the cancer to be arrested. All of this happened because I wanted to
get married 48 (a. in b. on c. with d. to) an off-white wedding
gown, which, by the way, appeared white in all the pictures.

〔VI〕 次の英文を読み、カッコ内のもっとも適する語句を選びなさい。

According to the American Medical Association, 26 million Americans suffer from migraine headaches. Many have tried all kinds of treatments, but nothing seems to stop the debilitating pain. But a doctor from Ohio says he's found a 49 (a. reason b. remedy c. cause d. medication) for migraines and it involves a little cosmetic surgery.

The agony forty-eight-year-old Kathy Kramer was enduring every week was crippling, almost 50 (a. sensible b. insensible c. sufferable d. insufferable). "I was pretty sure I had a brain tumor. Or I was having a stroke or 51 (a. something b. anything c. another d. other). And the pain sometimes would just make me cry." She is describing migraine headaches that ruled her life since college. The precious days she wasn't bedridden or twisting in pain were spent worrying about the next headache. "You don't live your life normally like other people do. It's debilitating, yes. And then you worry every day whether it's going to happen." Then, through the painful haze, a glimmer of 52 (a. despair b. truth c. hope d. falsity). "It was some kind of advertisement, like 'We have a cure that'll even actually make you look younger.'"

Dr. Bahman Guyuron, a surgeon in Ohio, attempts to relieve migraines 53 (a. under b. from c. through d. after) plastic surgery. He noticed an interesting 54 (a. side effect b. past history c. attitudinal change d. egocentric feeling) in patients undergoing cosmetic surgery: their migraines were vanishing as rapidly as their wrinkles. "They said, 'Not only am I happy 55 (a. at b. on c. from d. with) what I see, I haven't had migraine headaches for a while.'"

After several studies, he and colleagues devised a surgical technique targeting muscle groups around the septum, in the forehead or frowning muscles, in the temple, and at the base of the skull. These places, Guyuron says, pressure nerves, which in turn causes migraines. The surgery's premise: remove the muscles and nerves to alleviate that pain. The 56 (a. procedure b. procession c. sequence d. consequence) of surgery, according to Guyuron's most recent study: 92 percent of patients saw at least a 50-percent dip in the frequency and intensity of their migraines.

But some neurologists, like Dr. Seymour Solomon, 57 (a. don't admit b. don't evaluate c. suspect d. question) those findings. "These numbers are accurate, but the methodology makes them meaningless. It's completely contrary to 58 (a. what b. how c. which d. that) we know about the mechanism of migraine. Cutting a couple of muscles here should have no effect."

Dr. Guyuron is not claiming his surgery is a total cure but believes it has potential. "We really are not eliminating that tendency for migraine headaches. For 59 (a. ideal b. practical c. temporal d. temporary) purposes, if the patients are symptom-free and continue to be symptom-free, we have cured them from the condition."

Two and a half years after her operation, Kramer experiences minor headaches only 60 (a. frequently b. more frequently c. infrequently d. more infrequently). "But basically I would tell you I've had zero migraines. You realize there is a freedom that I had never had in my life, and you go, 'This is life-altering.'"

〔Ⅶ〕 各問いの下線部 a, b, c, d に誤りがあればその文字をマークしなさい。なければ e をマークしなさい。

(61) I believe that good^a is manifested from every experience that comes^b into our lives. I also believe that there is a purpose for everything, if^c we know what^d it is or not.

(62) Michelle Risinger's been severely allergy to^a nuts for as long as^b she can remember. For her and others like her^c even one one-thousandth^d of a peanut can spell disaster.

(63) A: "I was^a in the U.S. for five years, but I'm not very confident when^b I speak^c in English."
B: "So^d am I."

(64) Michael Jackson wore^a all white, and an assistant held^b an umbrella over his head as he entered^c the building. The process of jury selection has begun, with Jackson's lawyers screening^d the first pool of potential jurors.

(65) In earlier years, the distinctions between classes had been^a the "redbirds" and the "bluebirds" in a vain attempt^b to avoid labeling^c one class the smart one and another^d class the "dummy" group.

(66) A: "Your mind has not been on^a cooking. Your mind has been elsewhere^b.
You're in love and you are unhappily^c in love."
B: "Does it show?"^d

- (67) At the moment of my diagnosis of breast cancer, I was devastated. I did my crying^a for about 24 hours, and then I decided taking^b as much^c control of my new situation as I could^d.
- (68) Betty taught that^a Sunday school class for twenty years. Though^b she never married, or had children of her own^c, the town became to^d think of her as a surrogate parent since she taught two generations of children.
- (69) A new kind of hair cologne was designed^a to remove the smell of^b tobacco was put on^c the market last month.^d
- (70) The teachers began by^a reading aloud from^b Anne Frank's *Diary of a Young Girl* and Elie Wiesel's *Night*. They read aloud because almost^c students could^d not afford to buy books.
- (71) His daughter woke up him^a at^b midnight when she suddenly felt scared of^c the darkness in^d the hospital ward.
- (72) I have since^a completed my manuscript and I am thrilling^b to say that my first book will be published this week. I will see my long-held^c dream come true^d.
- (73) In each August^a many new students come to us with warning labels^b. The long list of students and their medical ailments is^c handed out the first day^d.
- (74) Very neat^a in appearance, Mark had that^b happy-to-be-alive attitude that makes^c even his occasional mischievousness^d delightful.

- (75) In 1998, principal^a Linda Hooper wanted to start a project that would^b teach the students at Whitwell Middle School about to understand and tolerate^c different cultures.^d
- (76) "I can't lie to^a you. It isn't paradise. Every time it thunders^b, the electricity goes off^c, and we have to pump own water^d from the well."
- (77) I began life as^a a learning-disabled child. I had a distortion of vision what^b we label "dyslexia." Dyslexic children often learn words quickly, but they don't know they don't see them^c the way other people do.^d
- (78) A desire burned deep^a inside me writing and seeing^b my words in print. It was my fantasy, one^c I suppressed because I lacked^d self-confidence.
- (79) A: "I know how^a these things bore^b you, but would you mind keeping an eye on^c Kathy for me?"
 B: "Oh, I'd be happy to.^d"
- (80) Eleven million Americans have food allergies^a, accounting for tens of thousands^b of emergency room visits^c and 150 to 200 deaths^d a year.