

کد کنترل

411

A



محل امضا:

نام خانوادگی:
نام:

صبح جمعه
۱۳۹۶/۱۲/۴
دفترچه شماره (۲)



«اگر دانشگاه اصلاح شود، مملکت اصلاح می‌شود.»
امام خمینی (ره)

جمهوری اسلامی ایران
وزارت علوم، تحقیقات و فناوری
سازمان سنجش آموزش کشور

آزمون ورودی دوره دکتری (نیمه‌متمرکز) - سال ۱۳۹۷

کلیه رشته‌های امتحانی گروه آزمایشی علوم پایه

تعداد سؤال: ۶۰
مدت پاسخگویی: ۹۰ دقیقه

عنوان مواد امتحانی، تعداد و شماره سؤالات

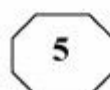
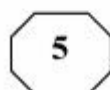
ردیف	مواد امتحانی	تعداد سؤال	از شماره	تا شماره
۱	استعداد تحصیلی	۳۰	۱۰۱	۱۳۰
۲	زبان انگلیسی - عمومی	۳۰	۱۳۱	۱۶۰

این آزمون نمره منفی دارد.
استفاده از ماشین حساب مجاز نیست.

حق چاپ، تکثیر و انتشار سؤالات به هر روش (الکترونیکی و ...) پس از برگزاری آزمون، برای تمامی اشخاص حقیقی و حقوقی تنها با مجوز این سازمان مجاز می‌باشد و با متخلفین برابر مقررات رفتار می‌شود.



411 A



- 137- Insurance companies have been reporting an increase the instructions of their sat-navs.
- 1) in accidents caused by drivers obediently following
 - 2) drivers cause in the accidents after following obediently
 - 3) of accidents do drivers cause when they obediently follow
 - 4) which drivers are caused in accidents by obediently following
- 138- When the next earthquake strikes the impressive but crowded city of Istanbul, the consequences are likely to be incredibly terrible.
- 1) whose population is over ten millions
 - 2) with its population of over ten million
 - 3) of an over ten millions population
 - 4) in its population over ten million

PART B: Vocabulary

Directions: Select the answer choice (1), (2), (3), or (4) that best completes the blank. Then mark the correct choice on your answer sheet.

- 139- The link between ivory and violence adds even more to the need to quash this deadly trade.
- 1) dispute
 - 2) speculation
 - 3) ingenuity
 - 4) urgency
- 140- Astronomers have been able to examine much of the universe's history by training their telescopes on distant galaxies and quasars that their light billions of years ago.
- 1) emitted
 - 2) disguised
 - 3) replicated
 - 4) impeded
- 141- When J. Langdon Down first described savant syndrome in 1887, coining its name and noting its association with powers of memory, he cited a patient who could recite Edward Gibbon's *The Decline and Fall of the Roman Empire* verbatim.
- 1) implicit
 - 2) hasty
 - 3) astounding
 - 4) innovative
- 142- Because anemia can be treated with blood transfusions, some historians state that in the dark ages people with porphyria might have tried drinking blood as a folk
- 1) misnomer
 - 2) remedy
 - 3) persistence
 - 4) prejudice
- 143- The toxins will cause the white blood cells to to the point they are no longer able to fight germs.
- 1) demote
 - 2) degenerate
 - 3) evolve
 - 4) soar
- 144- The history of the kingdom of Naples is interwoven with that of Sicily, with which for long periods it was united as the kingdom of the Two Sicilies.
- 1) loyally
 - 2) zealously
 - 3) inflexibly
 - 4) inextricably

GO ON TO THE NEXT PAGE

5

5

5

411 A

5

5

5

- 145- When a big company takes over a little company, the smaller company loses its separate identity and is the bigger one.
- | | |
|---------------------|-------------------|
| 1) attributed to | 2) challenged by |
| 3) assimilated into | 4) detracted from |
- 146- To be better able to do his call presentation, the history student the information he found in the encyclopedia with interviews of people who had fought in the war.
- | | |
|--------------|--------------|
| 1) augmented | 2) gathered |
| 3) exploited | 4) concurred |
- 147- For most of us, there is an obvious discrepancy between the current self and the ideal future self. Self-discrepancy theory states that people will be motivated to reduce this discrepancy so that their current self begins to their vision of their ideal self.
- | | |
|----------------|-------------|
| 1) contradict | 2) overcome |
| 3) disillusion | 4) approach |
- 148- Wayan Suta Negara was born on the slope of the sacred volcano but was forced to leave his home recently when fears of an eruption led to a mass
- | | |
|---------------|---------------|
| 1) genocide | 2) evacuation |
| 3) expediency | 4) anomaly |
- 149- Pterosaurs terrorized the skies for more than 160 million years until they went extinct alongside the dinosaurs some 66 million years ago. They are the largest animals to have ever flown, with some like the Quetzalcoatlus having wingspans as large as fighter jets.
- | | |
|----------------|-----------------|
| 1) colossal | 2) primary |
| 3) influential | 4) coincidental |
- 150- While the brain, a physical entity, is scientific investigation, the mind—an abstract, elusive quarry—is far less so, and questions about its architecture have occupied philosophers at intervals since classical antiquity.
- | | |
|-----------------|--------------------|
| 1) resistant to | 2) hazardous for |
| 3) amenable to | 4) consistent with |

PART C: Reading Comprehension

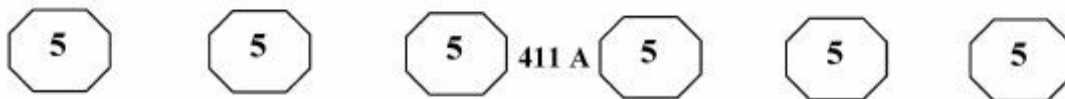
Directions: Read the following two passages and select the choice (1), (2), (3), or (4) that best answers each question. Then mark the correct choice on your answer sheet.

Passage 1:

The new study, published on Tuesday in the journal PLOS Computational Biology, looked at city dwellers all living in the same time zone in southern Europe. In previous work with the same data, the researchers estimated how often users called one another. Eventually, the scientists began to wonder whether there were patterns in the timing of calls. As it turned out, there were clear peaks and dips in phone calls throughout the day. One peak in outgoing calls was always at midday, while another was in the evening. In one city the group studied, for example, the early peak was centered around noon, while another occurred at 9 p.m. The lowest likelihood of calls going out was at around 4 p.m. and 4 a.m.

Over the course of the year, however, there was a noticeable shift. The last call times crept later during a stretch of three or four months, even as the earliest call times grew

GO ON TO THE NEXT PAGE

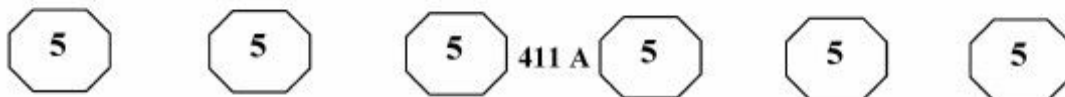


earlier. The peak calling periods moved as well, with the morning peak moving earlier and the evening peak moving later. Then, the process reversed direction. By the end of the year, the pattern somehow comes back to the same point where it was one year ago. The timing of this shift wasn't random: It moved in tandem with the lengthening of days during summer and shorter days of winter.

Other factors might affect the times that people make phone calls, including school and work schedules. To factor out these social influences, the researchers ordered cities according to how far west they were in the time zone. They then looked to see whether a city with a slightly earlier sunrise and sunset saw a corresponding shift in its calling pattern, compared to a city with a later diurnal cycle. Indeed, the timing of the last calls and the first calls closely tracked the movement of the sun. In one group of five cities, there was about a 40-minute difference between the easternmost city and the westernmost one, even though schools got out at the same time and other factors were the same.

- 151- What is the main point made by the passage about the timing of calls?
- 1) It does not follow a similar pattern worldwide.
 - 2) It tends to be longer when people are not working.
 - 3) It follows a pattern dependent on the length of daytime during the year.
 - 4) It seems to be random in all seasons during the year with more stability in summer time.
- 152- The word "another" in Paragraph 1 refers to
- 1) city
 - 2) call
 - 3) group
 - 4) peak
- 153- The findings of the research endeavor described in the passage support which of the following statements?
- 1) The timing pattern of calls made by people in the same time zone follows a predictable trend.
 - 2) Phone call peaks and dips do constantly undergo changes in cities in the same season based on how busy the callers are.
 - 3) Reasons for change in people's phone call habits are different in different time zones.
 - 4) The duration of phone calls made by individual people is not fixed all through a year.
- 154- Which of the following best describes the function of Paragraph 3 in relation to the first two paragraphs?
- 1) It refers to some other research studies already done in cities with different time zones to see if the findings of the study reported in the first two paragraphs are valid enough.
 - 2) It reports the attempt made by some new scholars to duplicate the study described in the first two paragraphs to see if the findings thereof are confirmed.
 - 3) It describes a follow-up study to investigate the role of some possible intervening variables in determining the timing of the calls.
 - 4) It provides evidence which is intended to qualify the claim made in the first two paragraphs.

GO ON TO THE NEXT PAGE



155- Which of the following best describes the author's attitude towards the subject of the passage?

- 1) Indifference
- 2) Impartiality
- 3) Amusement
- 4) Skepticism

Passage 2:

Get ready to nuke your packed lunch anywhere: a second microwave cooking revolution is around the corner. As well as portable ovens you can stick in a backpack, advances in electronics will enable appliances that detect when their contents are thawed or about to boil over, and smart ovens which cook multiple items at different rates simultaneously.

Conventional microwave ovens use a cavity magnetron, a vacuum tube developed for radar during the Second World War. Magnetrons are heavy and not efficient at generating microwaves. They may also create hotspots during cooking, a problem that rotating the oven's contents on a turntable does not totally solve.

Laterally diffused metal oxide semiconductor (LDMOS) microwave sources promise to change that. Similar to those used in cellphone towers and microwave communication systems, they are now being worked on by firms such as NXP, based in Eindhoven, the Netherlands. "The underlying technology has been here a long time. We're making changes to make it more specific and suited for consumer cooking appliances," says NXP's Paul Hart.

The compactness and high efficiency of the source makes portable microwave cookers possible, such as the 1.5-kilogram Adventurer from Wayv, a company based in Hertford, UK. The size of a large thermos flask, it uses an NXP source that can heat up to half a liter of food or drink, in cycles of up to 5 minutes. The rechargeable lithium-ion battery is good for six cycles on a charge.

The Adventurer raised £150,000 in less than 19 hours on the crowdfunding site CrowdCube in 2014. It will be launched first in the US early next year, and will cost about \$200. Wayv envisages it being used by campers and hikers, as well as the military and first responders. Unlike with camp stoves, it produces no telltale smoke and carries no risk of carbon monoxide poisoning.

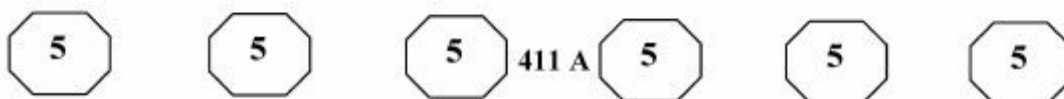
156- What does paragraph 1 mainly discuss?

- 1) New places that campers can hope to travel to thanks to a second microwave cooking revolution
- 2) Features of some new appliances that are intended to be included in new microwave ovens
- 3) The advantages of microwave cooking on camping trips
- 4) Properties of a novelty that is down the line

157- What does the word "that" in Paragraph 3 refer to?

- 1) Hotspot created during cooking
- 2) Conventional microwave oven size
- 3) Rotating the oven's contents on a turntable
- 4) Use of a cavity magnetron in microwave ovens

GO ON TO THE NEXT PAGE



- 158- The statement quoted from Paul Hart in Paragraph 3 is intended to
- 1) contrast a new technology with an old one
 - 2) supplement an earlier assertion
 - 3) publicize a new concept
 - 4) define a term
- 159- None of the following can be inferred about the appliance made by Wayv EXCEPT that it
- 1) was made in collaboration with NXP
 - 2) heats food contents faster than conventional ovens
 - 3) is more suitable for campers to carry around with them
 - 4) works on a battery that can be recharged as many as six times
- 160- The passage provides sufficient information to answer which of the following questions?
- I. Why does the Adventurer produce no telltale smoke?
 - II. Are magnetrons still used in the construction of radar?
 - III. Are conventional microwave ovens likely to cause carbon monoxide poisoning?
 - IV. What makes portable microwave cookers portable compared with conventional microwave ovens?
- 1) IV
 - 2) I
 - 3) II and III
 - 4) I and IV

کتاب شگفت انگیز لغات زبان انگلیسی کنکورهای ارشد و دکتری

تالیف استاد مهرداد زنگیه وندی***

شما باید زبان عمومی را ۱۰۰٪ بزنید!

برای دانلود رایگان یک فصل از کتاب کلیک کنید

This is the end of Section 5.

زبان عمومی گروه علوم پایه

شماره سوال	گزینه صحیح
131	1
132	3
133	4
134	2
135	2
136	3
137	1
138	2
139	4
140	1
141	3
142	2
143	2
144	4
145	3
146	1
147	4
148	2
149	1
150	3
151	3
152	4
153	1
154	3
155	2
156	4
157	4
158	2
159	3
160	1