

工 学 部

入 学 試 験 問 題

A 日程 1 月 28 日

英 語

注 意 事 項

1. 試験監督者の指示があるまで、問題冊子を開かないこと。
2. 問題冊子に落丁、乱丁があった場合は、試験監督者に申し出ること。
3. 試験監督者の指示に従って、解答用紙の受験番号欄に受験番号を記入し、その下のマーク欄にもマークすること。
4. 受験番号が正しくマークされていない場合は、採点できないことがある。
5. マーク方式の解答方法は、下の『解答上の注意』をよく読むこと。
6. 試験終了後、問題冊子は持ち帰ること。

解 答 上 の 注 意

マーク方式での解答例

〔英語〕 解答群より、③をマークするときは、次の〔例〕のように解答欄の③にマークする。

〔例〕

1	①	②	●	④	⑤	⑥	⑦	⑧	⑨	⑩
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英 語

- I. 以下の英文は、樹木の受粉戦略について述べたものである。これを読み、問A・問Bに答えよ（なお、*印を付した語句には注がある）。

The tree must buy the animal's help. Many primitive plants, such as waterlilies and the trees of the custard-apple family, the Annonaceae, allow or encourage the pollinating* insect to eat great chunks* of the flower itself. Others offer custom-made especially attractive food, which commonly but not always takes the form of nectar*, both sweet and nourishing. Sometimes they lure the pollinators with aromatic oils. Often the pollinating animals eat a lot of the pollen* itself. [1], trees that seek insect help must pay a double price. First they must produce the pollen and ovules*, and all the supporting apparatus of petals* and sepals* — but then they must make a surplus*, to bribe* the pollinators.

Some of the relationships between trees and their pollinators are somewhat loose: many trees solicit* the help of several or many animal helpers, and many animals seem happy to pollinate many different trees — domestic honey bees, for example, are generalist pollinators. [2] often the relationship is specific. Often a particular plant is completely committed to one particular pollinator (a bee, a moth*, a wasp*, a hummingbird*), while each pollinator depends absolutely upon the particular tree. Generalism spreads the options, but reduces precision. Specialization improves the accuracy, but also means that the fate of any one creature is linked absolutely to the fate of another. Lose the pollinator (for example through some over-enthusiastic attack with insecticide*) and you lose the plants that depend on it.

Insects and birds are the chief animal pollinators and for them (unlike mammals*, which tend to be color-blind) color is critical*. They each have their preferences. Beetles were probably the world's first animal pollinators (they pollinated cycads* long before flowering plants came on the scene), and beetles prefer white flowers. They ignore red. Bees too prefer white — [3] bees are perhaps most alert to ultra-violet*, which we don't see at all: often the flowers that seem to us to be plain white turn out to be ultra-violet colored (and intricately patterned — sometimes with a road map to the nectaries*).

Red or purple flowers attract butterflies — and may repel all the insects that prefer white, including the potential freeloaders*. Moths are closely related to butterflies and yet, [4] beetles and bees, they prefer white. The color preferences of butterflies and moths are reflected in the related Amazonian trees *Hirtella* and *Coupeia*. (They are both in the family Chrysobalanaceae, in the Malpighiales.)

The many species of *Hirtella* are geared up* perfectly to butterflies. They open by day; they are pink or purple (rarely white); they have hoods, which provide the butterflies with a place to land; they reward their pollinators with copious* nectar; and they have only a few stamens (the organs that bear* the pollen), which are neatly and widely spaced. Butterflies of many species, guided by sight as well as scent, land at leisure on the flowers of *Hirtella* and feed decorously*, coating themselves in pollen as they do so. *Coupeia* puts its trust in moths — [5] big hawkmoths, which fly by night and hover like hummingbirds to feed. *Coupeia* flowers open at night, just a few at a time, and are always white. They have a great many stamens — from 10 to 300. They coat the hovering hawkmoth (and occasional hummingbird) with liberal quantities of pollen as it probes among the tangled* stamens for the nectar — which *Coupeia* provides even more generously than *Hirtella*.

(出典 : Colin Tudge, *The Secret Life of Trees: How They live and Why They Matter*, pp.321-323)

注 : pollinate 授粉する chunk かたまり nectar 花蜜 pollen 花粉
ovule, petal, sepal 花の各部の名称 surplus 余り bribe 買収する
solicit 求める moth 蛾 wasp スズメバチ hummingbird ハチドリ
insecticide 殺虫剤 mammal 哺乳類 critical 重要な cycad ソテツ
ultra-violet 紫外線 nectary 蜜腺 freeloader ただ乗り屋
be geared up 調整ができている copious 豊富な bear 生じる
decorously 行儀よく tangled もつれた

問 A. 文中の 1 5 に入れるのもっとも適当なものを, ①~④の中から選び,
解答欄にマークせよ。

- | | | | | |
|----------------------------|----------------|---------------|---------------|------------|
| <input type="checkbox"/> 1 | ① However | ② For example | ③ Instead | ④ In short |
| <input type="checkbox"/> 2 | ① So | ② But | ③ Usually | ④ Because |
| <input type="checkbox"/> 3 | ① although | ② since | ③ therefore | ④ which |
| <input type="checkbox"/> 4 | ① unlike | ② for | ③ like | ④ from |
| <input type="checkbox"/> 5 | ① particularly | ② similarly | ③ temporarily | ④ secretly |

問 B. 6.~15. の各文が本文の内容に合っていれば解答欄の①にマークし, 合っていなければ解答欄の②にマークせよ。

6. Some plants offer their flower to the pollinating insect for food.
7. Pollen and ovules are not enough for trees to attract their pollinating insect.
8. Domestic honey bees depend on a particular type of tree.
9. Generalist pollinators are less precise than specialist ones, because the former have a wide range of trees to pollinate.
10. According to the author, bees are probably the world's first pollinators.
11. The author suggests that ultra-violet patterns in flowers tell bees how to go to the nectaries.
12. Butterflies prefer white flowers to pink ones.
13. The author suggests that butterflies usually visit flowers at night.
14. Butterflies visit *Hirtella* flowers to feed on the pollen.
15. *Coupeia* flowers sometimes give their nectar to hummingbirds.

II. 次の1.～5.の日本語の意味の英文を、書き出しの語句に続けて下にある語句を並べかえて作るとした場合、に入れるべきものはどれか。解答欄にマークせよ。

1. 劇場内は飲食禁止ですと言われた。

We were _____ 16 _____ 17 _____ inside the theater.
① drink ② eat ③ not ④ or ⑤ to ⑥ told

2. 壊れた椅子を400円払って持って行ってもらった。

I _____ 18 _____ 19 _____ 400 yen.
① taken ② away ③ paying ④ the broken chair ⑤ had ⑥ by

3. この仕事が終わるまで家に帰れない。

I _____ 20 _____ 21 _____ the work.
① finished ② I have ③ home ④ until ⑤ go ⑥ can't

4. 上着を左腕にかけたまま、男は入ってきた。

The man _____ 22 _____ 23 _____ his left arm.
① from ② hanging ③ his jacket ④ in ⑤ with ⑥ came

5. 2か月前に予約しておいたチケットの代金を入り口で支払った。

At the entrance I _____ 24 _____ 25 _____ two months ago.
① booked ② the ticket, ③ had ④ I ⑤ paid for ⑥ which

III. 次の1.～5.の英文の意味が通じるためには、の中にどのような語を入れたらよいか。下の語群から選んでマークせよ。

1. The Indian restaurant stands next 26 the cafe.

2. Your future success will depend 27 your present effort.

3. A good short story shows the reader a good slice 28 life.

4. The divers under water should be supplied 29 enough air.

5. It is necessary 30 you to go there by noon.

[語群 : ① on ② for ③ of ④ at ⑤ to ⑥ with]

IV. 1. ~ 5. の英文の説明に該当する英単語を下の語群〔①~⑩〕から選び、解答欄にマークせよ。

1. things owned by someone

=

2. the reason for which something exists

=

3. a person with whom you work in a company

=

4. things that you carry while traveling

=

5. a story of a person's life written by that same person

=

[語群 : ① colleague ② future ③ report ④ purpose
 ⑤ owner ⑥ crowd ⑦ autobiography ⑧ luggage
 ⑨ property ⑩ language]

V. 36. ~ 40. の英単語のいちばん強く発音する箇所はどこか。解答欄にマークせよ。

36. at · tend · ance
 ① ② ③

37. ref · er · ence
 ① ② ③

38. gram · mat · i · cal
 ① ② ③ ④

39. ri · dic · u · lous
 ① ② ③ ④

40. de · ter · mi · na · tion
 ① ② ③ ④ ⑤