

Part I – Language skills (70 points)

Appropriate answers are in red.

The Intelligence of Ants

Ants are incredible creatures. Individually they are small and often defenceless, with a brain no larger than the tip of a pin. Yet together these fascinating insects living in colonies operate as a single superorganism, capable of building complex subterranean megacities, complete with ventilation systems, sewers and transportation highways. Some species will even cultivate their own food in specifically designed chambers.

In the 100 million years since they diversified, ants have built up a wealth of accomplishments. Aside from Antarctica and a few remote islands, **these insects have colonised every landmass on Earth**, and their collective biomass is estimated to rival that of the total biomass of the 7 billion humans alive today. On top of all this, some species are also proficient tool users and have been observed using sand grains or leaf fragments to collect and transport liquids back to their nests.

To investigate this behaviour, _____ (1) team of researchers presented ants with various potential tools, including twigs, pine needles and soil grains, as well as artificial items such as sponge and _____ (2) paper. When _____ (3) ants were offered _____ (4) liquids containing _____ (5) water and honey they began to experiment with the selection of tools at their disposal. Eventually, they started to display _____ (6) preference for specific tools – even ones not present in their natural environment: the ants were e.g. observed tearing a sponge into _____ (7) smaller pieces, presumably for better ease of _____ (8) handling.

What does this mean for science?

While **tool use in ants has been documented before**, this is the first time they have been observed selecting the most appropriate tool for a task. As the ants treated the honey and the water differently, this suggests that even without any prior experience with the materials, they are able to understand the properties of both the tool and the liquid they are transporting. In addition, the ants displayed a quick ability to learn which tools were most suitable. The researchers believe that ants evolved to use tools because they are not able to expand their stomachs, and they therefore require an alternative mechanism for transporting materials.

(Source: The Zoological)

TASKS I – VI DRAW ON THE TEXT ABOVE.

I. Read the above text carefully, and decide whether the following statements are true (T) or false (F). (3 points)

- | | |
|--|----------|
| 1 Ants are not very clever because of the size of their brain. | F |
| 2 Ants can be found everywhere in the world. | F |
| 3 Ants will use even materials they have not worked with before. | T |

II. In the text below, add either an indefinite article (*a/an*), a definite article (*the*), or a zero article (0). A blank space will automatically be considered an incorrect answer. (8 points)

To investigate this behaviour, **a** (1) team of researchers presented ants with various potential tools, including twigs, pine needles and soil grains, as well as artificial items such as sponge and **0** (2) paper. When **the/0** (3) ants were offered **0** (4) liquids containing **0** (5) water and honey they began to experiment with the selection of tools at their disposal. Eventually, they started to display **a/0** (6) preference for specific tools – even ones not present in their natural environment: the ants were e.g. observed tearing a sponge into **0** (7) smaller pieces, presumably for better ease of **0** (8) handling.

III. Write a word with the opposite meaning – either an antonym (e.g. good – bad) or an opposite derived by adding a negative prefix or suffix (e.g. possible – impossible). Choose answers from the list given below. (5 points)

- 1) defenceless – **strong** _____
- 2) complex – **simple** _____
- 3) artificial – **natural** _____
- 4) natural – **unnatural** _____
- 5) suitable – **unsuitable** _____

helpless – simple – natural – unsuitable – strong – fitting – home-made – unnatural – naturaless – defenceful – naturally – incomplex – real – clear – incorrect

IV. Re-write the sentence using the passive voice, keeping the same meaning as the original sentence. (4 points)

These insects have colonised every landmass on Earth.

Every landmass on Earth has been colonised by these insects.

V. Re-write the sentence using the active voice, keeping the same meaning as the original sentence. If necessary, use suitable words/phrases from the rest of the text (the sentence is highlighted in bold). (4 points)

Tool use in ants has been documented before.

Scientists / Researchers / etc. have documented tool use in ants before.

VI. Using the word given in capital letters, write a new sentence which has the same (or almost the same) meaning as the original sentence. Do not change the form of the word in capital letters. (12 points)

1) Tony never took any notice of the advice people gave him. ATTENTION
Tony _____

Tony never paid any attention to the advice people gave him.

2) The journey was shorter than I had expected. LONG
The journey _____

The journey was not as long as I had expected.

3) Computers are half the price they were a few years ago. AS
Computers used to be _____ they are now.

Computers used to be twice as expensive as they are now.

4) I think we should go home now. WENT
It's _____

It's (high) time we went home.

5) Have you received your salary yet? BEEN
Have you _____ yet?

Have you been paid yet?

6) You should go now before the traffic gets too bad. BETTER
You _____

You'd (/had)) better go now before the traffic gets too bad.

VII. Add suitable words to the text (use only one word in each gap). (8 points)

New Youth Club

Youngsters in the citycentre will lose out on a much-loved project if substantial funds are not found this year. The 'New Youth Club', (1) **which** is open to young people from the ages of 10 to 17, (2) **is** being threatened with closure (3) **by** Health and Safety officials who claim the building is unsafe. The club, built 30 years ago, was badly damaged (4) **by / in / during** heavy storms last year and city engineers estimate that one hundred thousand pounds is needed (5) **to** repair structural damage. With only limited funds (6) **at** their disposal, managers fear the club will have to close. Youngsters from the club have organised an Open Day (7) **on / for** Tuesday in an effort to raise some of the money needed to enable the repairs to (8) **be** undertaken. "This alone won't be enough, however," warned Adam Ross, Youth Leader.

VIII. In each space, write the correct form of the verb given in brackets. (8 points)

Last week I (1) **was walking** (walk) home after playing tennis when it (2) **started** (start) raining very heavily. "Oh no, I (3) **will get / am going to get** (get) soaked before I (4) **reach/'ve reached** (reach) home," I thought. "I wish I (5) **had remembered** (remember) to bring my raincoat." But unfortunately I (6) **left / had left** (leave) it at home. "How stupid of me! I (7) **always forget / am always forgetting** (always forget) to bring it with me." Luckily just then a friend of mine passed in her car and offered me a lift." (8) **"Are you going** (you go) home?"

IX. Create new words from the words given in brackets – use prefixes and suffixes (only use one word for each gap). (8 points)

About Fish and Aquariums

There are more than 200,000 species of fish inhabiting many (1) **different** (differ) waters. From the deepest part of the seas thousands of feet down in total (2) **darkness** (dark), to the beautiful aqua-blue waters of the coral reefs, fish have adapted an incredible variety of life-forms, styles, and (3) **behaviour / behaviours** (behave). The group of aquatic animals we call fishes has evolved for over 400 million years to be the most numerous and diverse of the major vertebrate groups. Forty-one percent of the world's fish species inhabit only fresh water. This is pretty (4) **amazing** (amaze) considering that fresh water covers only 1 percent of the world's surface. As you (5) **probably** (probable) already know salt water covers 70 percent of the earth's surface. So the number and (6) **variety / varieties** (vary) of fresh water species to marine or saltwater species is all the more mind-boggling. While they inhabit the smallest amount of water, they have, in fact, adapted to a much (7) **wider** (wide) range of habitats. Let's decide what allowed them to live so (8) **successfully** (success) in the medium we call water.

X. Choose the correct option for each gap. Only one of the options is correct in each case. (10 points)

Global temperatures

The world is now warmer 1) **B** at almost any time since the end of the last ice 2) **A** and, on present trends, will continue to reach a record high for the entire period since the 3) **D** of civilisation, a study has found. Scientists say it is further 4) **A** that modern-day global warming isn't natural, but the result 5) **B** rising carbon dioxide emissions that have rapidly grown 6) **B** the Industrial Revolution began roughly 250 years ago. If 7) **C** factors were still governing the climate, the Northern Hemisphere would probably be destined to freeze over again in several thousand years. 8) **C**, scientists believe the enormous increase 9) **C** greenhouse gases caused by industrialization will almost certainly 10) **D** that.

- | | | | | |
|----|---------------|----------------|-----------|----------------|
| 1) | a) that | b) than | c) then | d) thus |
| 2) | a) age | b) era | c) period | d) cycle |
| 3) | a) cradle | b) arise | c) first | d) dawn |

- 4) a) **evidence** b) data c) witness d) sign
 5) a) in b) **of** c) on d) with
 6) a) afterwards b) **since** c) because d) owing to
 7) a) human b) personal c) **natural** d) organic
 8) a) Indeed b) Secondly c) **Instead** d) Firstly
 9) a) on b) over c) **in** d) at
 10) a) escape b) avoid c) misuse d) **prevent**

Part II – Culture and history (30 points)

I. Find the matching pairs from the two columns.

(5 points)

1. Walt Whitman **d)** Leaves of Grass
 2. William Faulkner **e)** The South
 3. Henry Kissinger **b)** American politician
 4. Leonard Cohen **a)** Canadian singer song-writer, poet, novelist
 5. Vladimir Nabokov **c)** Lolita

1...**d**... 2...**e**... 3...**b**... 4...**a**... 5...**c**....

II. Answer the following questions.

(20 points)

1. Which of these writers wrote novels about Native Americans (Indians)?

(1 point)

- a) James Fenimore Cooper** b) Washington Irving
 c) John Updike d) Stephen Crane

2. The Statue of Liberty was given to the U.S. people by

(1 point)

- a) England b) Spain
c) France d) Canada

3. Who fought against whom in the Battle of the Little Bighorn?

(1 point)

- a) The Confederate army against the Union army b) Americans against the British
c) the US Cavalry against Native Americans (Indians) d) Americans against Mexicans

4. Which of these authors was a dramatist?(1 points)

- a) Nathaniel Hawthorne b) Emily Dickinson
 c) Sylvia Plath **d) Tennessee Williams**

5. What does the American Congress consist of?

(2 points)

The Senate, the House of Representatives

6. Where is the Empire State Building located? **New York City**

(2 points)

7. Who is the author of *Moby Dick*? **Herman Melville**

(2 points)

8. Which political party is currently in power in the UK?

(1 point)

- a) Labour **b) Conservatives**
 c) Liberal Democrats d) Republicans

9. What does the United Kingdom consist of?

(1 point)

- a) England, Wales, Scotland, Northern Ireland** b) England, Scotland, Ireland
 c) England, Scotland, Wales d) England, Wales, Northern Ireland

10. Which century is primarily associated with the reign of Queen Victoria? **19th century**

(2 points)

11. In which decade was Margaret Thatcher in the position of the British prime minister? (1 point)

- a) 1940s b) 1950s
 c) 1960s **d) 1980s**

12. Which of these countries is not a former British colony?

(1 point)

- a) Mongolia** b) India
 c) Australia d) South Africa

13. What is the name of the current British Prime Minister? **Theresa May**

(2 points)

