

**ANGLAIS****TEXT** : New centimeter-accurate GPS system

ANSWER KEY

A. READING COMPREHENSION**A.** Read the text and write down the number of the paragraph corresponding to each idea. (2.5 marks)

Ideas	Paragraph n°
1. How accurate the system is	3
2. Ways to generalize the invention	5
3. Possible applications of the invention	2
4. An invention and its purpose	1
5. What makes the new positioning system a revolution	4

B. Complete the following chart about the invention.

(1.5 marks)

6. Name of the system	GRID
7. Nature of the system	Software-defined GPS receiver
8. Type of device the system works with	Mobile
9. Function of the system	extract centimeter accuracies from the inexpensive antennas found in mobile devices
10. Possible uses of the new system	a. allow unmanned aerial vehicles to deliver packages to a specific spot on a consumer's back porch
	b. enable collision avoidance technologies on cars.
	c. surveying and mapping geographical areas

C. Choose **T** (True) or **F** (False) and justify by quoting from the text.

(3 marks)

11. **F: The researchers' new system could allow unmanned aerial vehicles to deliver packages**
12. **F: - Humphreys and his team in the Radionavigation Lab have built a low-cost system that reduces location errors from the size of a large car to the size of a nickel -- a more than 100 times increase in accuracy**
- The researchers anticipate that their software's ability to leverage⁴ low-cost antennas **will reduce the overall cost of centimeter accuracy,**
13. **T: - Humphreys and his team are working with Samsung to develop a snap-on accessory that will tell smartphones and tablets their precise position and orientation.**

D. Choose and write down **a, b, c,** or **d** to indicate the correct answer. (1.5 marks)

14. “collision avoidance technologies on cars” (line 7) are :
b. technical systems built on cars to prevent crashes.
15. “unmanned aerial vehicles” (line 6) :
a. have no pilots on board.
16. “low-cost antennas” (line 17) :
a. are no obstacles to applying the GPS system to mobile devices.

II. LINGUISTIC COMPETENCE

E. Reformulate the sentences without changing their meaning. (2 marks)

17. If they had known the importance of such a technological product, they would have bought it.
18. New options to deliver precise position information have recently been designed (by researchers).

F. Use the following words to complete the sentences. (2 marks)

HEIGHT / DEPTH / WIDE / AMOUNT

19. Now, it has become obvious that the **DEPTH** of the sea can be measured accurately using the new GPS system.
20. Today, some armies can use a GPS system to estimate the **AMOUNT** of waste generated by troops on the ground.
21. A three-lane road is **WIDE** enough for drivers to avoid collisions when overtaking cars.
22. At toll gates on highways, a GPS system is able to determine the **HEIGHT** of long vehicles from the wheels to the top of the roofs.

G. Complete the sentences with the correct form of the verbs. (2 marks)

23. **have ever succeeded**
24. **worked**
25. **would have been**
26. **had not been**

H. Complete the passage with the appropriate prepositions. (1.5 marks)

TO – BY – IN – OF – AHEAD – WHERE

27. **IN**
28. **WHERE**
29. **TO**
30. **OF**
31. **BY**
32. **AHEAD**

III. WRITING

33. Choose one topic and write a passenger of not more than 150 words. (4 marks)

- Relevance (1 mark)
- Accuracy (1 mark)
- Coherence (1 mark)
- Ideas (1 mark)