



ANGLAIS

The bubble car¹ is back

Bubble cars¹ were built to provide cheap personal transport. Most were two-seaters with just three wheels. One of the first was the Italian-made Iso Isetta. Germany was a prolific builder, too. Messerschmitt and Heinkel, for example, turned to bubble cars as an alternative. BMW, meanwhile, reengineered the Isetta to use an engine from one of its motorcycles.

- 5 Three new versions, known as EN-Vs (for Electric Networked-Vehicles), are enthraling the crowds at the Expo 2010 in Shanghai. They can be driven normally or operated autonomously, with their occupants doing other things while the cars automatically avoid bumping into one another. They can also be summoned from their parking places using a mobile phone. And instead of being powered by smoky little petrol engines, they are driven electrically. **What is most intriguing**, however, is that they
- 10 balance on just two wheels. (...)

The platform of an EN-V, which contains the batteries and is mounted on a sliding mechanism, forms the chassis of the vehicle. It moves forwards when the vehicle is parked, so that it tips on to a pair of "landing wheels" at the front. **That** makes **it** easier to get in and out, for access is from the front via a large, transparent door. When the EN-V powers up, the platform shifts its centre of mass back to the

15 centre of the vehicle. The drive wheels then rotate as necessary, to achieve both balance and propulsion.

The advantage of having only two wheels is that the car can be shrunk into a small package. At around 1.5 metres (59 inches) long by 1.4 metres wide, an EN-V is less than half the size of a MINI. Two wheels also allow greater manoeuvrability. With a top speed of 40kph (25mph) and a range of

20 just 40km, its performance is limited. But average traffic speeds in many cities are already below 40kph and the EN-V's range is well within the typical daily mileage of most urban drivers.

Modern cars are over-engineered because they are designed for use between cities, not just within cities. In low-speed urban environments, lighter engineering can be used without compromising safety.

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FOOTNOTES:

- 1 Petite voiture (en forme de bulle) version

I. READING COMPREHENSION QUESTIONS (10 marks)

A. Paragraphs and Titles: Match the letters preceding the titles paragraph numbers. (2.5 marks)

TITLES	PARAGRAPH NUMBERS
a. Characteristics of the latest models	1. -----
b. Requirements in modern car engineering	2. -----
c. Bubble cars initial design	3. -----
d. Functionality of the Electric Networked-Vehicles	4. -----
e. Usefulness of bubble cars	5. -----

B. Stating Facts and Ideas: Circle the corresponding letter and justify by quoting from the text.(3 marks)

6. A Mini is at least 3 m long. T/F

Justification : -----

7. Bubble cars are not yet available to the general public. T/F

Justification : -----

8. EN-Vs are hybrid vehicles powered with both petrol and electrical engines. T/F

Justification : -----

9. The EN-V is designed to move faster in cities. T/F

Justification : -----

C. Referencing: Find what the underlined words or phrases refer to in the text. (1.5 marks)

10. “What is most intriguing”: -----

11. “That”: -----

12. “It”: -----

D. Information Transfer: Complete the chart with information about the characteristics of EN-V car by putting the information from the list below in the right place. (2 marks)

- Driven normally
- Operated autonomously
- Large and transparent door
- Access from the front
- Two wheels (the car can be made to shrink into a small package)
- Balancing on just two wheels
- Rotation movement of the drive wheels
- Can be summoned using a mobile phone

Electric Networked-Vehicles	
Versatility	13. ----- 14. -----
Operability	15. ----- 16. -----
Manoeuvrability	17. ----- 18. -----
Accessibility	19. ----- 20. -----

E. Vocabulary in context: Circle the letters corresponding to the correct answers.

(2marks)

- 21. **“A prolific builder” (line 2) *means***
 - a. A single builder
 - b. A large number builder
 - c. A small number builder

- 22. **“Three new versions (...) are enthralling the crowds at the Expo.” (lines 5 – 6) *means***
 - a. The people at the Expo are presented three new versions.
 - b. The people at the Expo are excited about the three new versions.
 - c. The people at the Expo are not showing interest in the three new versions.

- 23. **“They can (...) be summoned (...) using a mobile phone.”(lines 7 – 8) *means***
 - a. They can be detected using a mobile phone.
 - b. They can be positioned using a mobile phone.
 - c. They can be called back using a mobile phone.

- 24. **“Intriguing” (line 9)**
 - a. fascinating
 - b. frightening
 - c. encouraging

II. LINGUISTIC COMPETENCE (6 marks)

F. *Use the verbs in brackets in the right tense or form.* (1.5 marks)

- 25. BMW----- (**can**) to reengineer the Isetta model recently.
- 26. Heinkel do not produce this type of engines any more. They stopped ----- (**manufacture**) smaller car models.
- 27. It ----- (**must be**) difficult to improve the performance of electric cars in the past years.

G. *Complete with the appropriate words.* (1.5 marks)

- 28. The new model is not so speedy ----- (**than / that / as**) the first prototype.
- 29. This is the right moment for advertising small cars; they are ----- (**like / alike / likely / unlike**) to generate big profits.
- 30. Two firms designed different models; ----- (**most / neither / both / either**) of them was suitable for city traffic as they polluted a lot.

H. Reformulate the sentences using the prompts given.**(1.5 marks)**

31. The EN-V has a limited performance, but its range is suitable for the typical daily mileage of most urban drivers.

Although -----.

32. He went to a famous car body specialist and asked him to repair the dented parts.

He went to a famous car body specialist to have-----.

33. Car designers really do the wrong thing in letting down the bubble car.

Car designers -----.

I. Complete the sentences using the correct derivative of the underlined words.**(1.5 marks)**

34. These wheels will rotate in different directions.

The ----- movement of these wheels can be made in different directions .

35. They can be driven normally or operated autonomously.

They can be driven normally or operated with -----.

36. The visitors did not expect the Shanghai Expo to be so popular.

The success of the Shanghai Expo was rather ----- for the visitors.

III. WRITING: Choose one topic and write a passage of not more than 150 words.**(4 marks)**

Topic One: Big cities are often confronted with serious transport problems? Do you think that bubble cars can help improve the situation?

Topic Two: In developing countries where bubble cars are not yet available, how can transport problems be solved?