A N G L AI S

Flying saucers

(*A new type of dirigible could make it easier to deliver people and provisions to inaccessible places. It looks pretty cool, too*)

Transporting large and heavy bits of equipment is difficult. Roads, rivers and railways do not reach everywhere, and even if they did, many cumbersome[1] and heavy objects would need to be hauled in pieces, only to be put together at the final destination. Aeroplanes impose even tighter restrictions on shape and size, not to mention the need for runways. Heavy-transport helicopters, such as the Mil Mi-26 or Sikorsky S-64 Skycrane, address some of **these difficulties**, but their payloads[2] are limited to 20 and nine tonnes respectively, and their huge rotors create a powerful downdraft[3] that makes handling that payload rather difficult. So people have long been looking for other ways round **the problem**. Now an Australian aeronautical firm, Skylifter, thinks it has found the perfect solution.

The company is developing a piloted dirigible capable of carrying loads of up to 150 tonnes over distances as great as 2,000km (1,240 miles) at a speed of 45 knots (83kph). This would permit the craft to transport not just big and heavy equipment but entire buildings to remote areas. The company envisages modules ranging from rural hospitals and disaster-relief centres to luxury airborne cruise-ships.

Rather than use either a spherical or a cigar-shaped aerostat, as the gas-filled envelope of a lighter-than-air craft is known, Skylifter has developed a discus-shaped **one**. This means that like a traditional, round balloon—and unlike the elongated dirigibles that have up till now been used as serious modes of commercial transport—the craft is "directionless". In other words, it is ignorant of where the wind happens to be blowing from, which simplifies load-handling in places where the wind is frequently changing direction. At the same time, being flatter than a sphere, the aerostat acts less like a sail[4] than a traditional balloon does, making it easier to steer. The flying-saucer shape also acts as a parachute, affording greater control during descent.

Skylifter's engineers plan to construct a full-sized 150-metre piloted prototype, *Lucy*, over the next three years. If that works, Skylifter craft may yet bring aid to stranded disaster victims—and also to tired and bored millionaires sick of ocean liners.

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FOOTNOTES

1 large and heavy; difficult to carry
2 charge utile
3 a strong downward current of air (courant descendant)
4 voile (de bateau)

I. READING COMPREHENSION QUESTIONS

A. Find the corresponding answer after a careful reading of the text. Circle a, b or c. (2 marks)

1. The aerostat is designed to:
   a. transport people to inaccessible places.
   b. transport huge objects to distant areas.
   c. improve transport on distances as great as 2,000 km.

2. This new type of dirigible can
   a. develop a speed of 1,240 miles an hour.
   b. be a centre for accommodating victims of disasters.
   c. Be manoeuvred more efficiently than traditional dirigibles.

3. The aerostat has the shape of a
   a. round balloon.
   b. sphere.
   c. cigar.

4. With the aerostat, transported objects are
   a. large and heavy.
   b. in separate pieces.
   c. limited in size.

B. TRUE / FALSE Say whether these statements are TRUE or FALSE. Circle the corresponding letter and justify by quoting from the text. (3 marks)

5. Handling payload is as easy by helicopter as by aerostat. **T/F**
Justification : ----------

6. The aerostat depends heavily on the winds to fly over places. **T/F**
Justification : ----------

7. Millionaires will like *Lucy* as they like ocean liners. **T/F**
Justification : ----------

C. Complete the chart on the characteristics of the aerostat. (2 marks)

Shapes of the Aerostat	Advantages
8. ----------	**9.** ---------- **10.** Parachute (greater control of descent)
11. ----------	**12.** ----------

D. *Find the payload of each one of the helicopters mentioned in the text.* (0.5 marks)

13. S 64 : ----------
14. Mil Mi 26: ----------

E. Find in the text what the underlined words refer to. (1.5 marks)

15. "these difficulties": ----------
16. "This": ----------
17. "one": ----------

II. LINGUISTIC COMPETENCE

F. ***Use the correct form the words in brackets to complete the sentences.*** **(2.5 marks)**

The new invention didn't prove as ---------- [18] (**disaster)** as many engineers feared. They were even ---------- [19] (**relief)** to see that it was really ---------- [20] (**convene)** for the transport of very heavy objects over long distances, and less accessible areas. The aerostat then is ---------- [21] **(compare)** easier to control mainly during descent than a traditional heavy transport helicopter. It is also considered as relatively ---------- [22] (**speed**) on account of the loads handled.

G. ***Reformulate using the prompts given***. **(1.5 marks)**

23. Perhaps they dropped the project after a complete analysis of its feasibility.
They may ----------

24. The fully concerted plan will oblige the opponents to come together.
The fully concerted plan will make ----------

25. For creating infrastructures in remote inaccessible areas, the technology needs to be mastered.
It's time----------

H. ***Turn into compound words as in the example***. **(1.5 marks)**

e.g.: An aerostat which is shaped like a discus = A discus-shaped aerostat

26. A system which is known to perfection = ----------

27. A tool used for shaping a metal = ----------

28. A software which is used for processing data = ----------

I. ***Rewrite the sentences using the link words given***. **(1.5 marks)**

29. They have achieved important improvements on the dirigible but it is not all the more safer.
In spite of ----------

30. Aeroplanes imposed tighter restrictions on the transport of large equipment, but helicopters did not.
Unlike ----------

31. For environmental reasons, engineers want to reduce the speed of Concorde if that does not affect its commercial attractiveness.
Providing that ----------

II. WRITING: *Choose one of the topics and write a passage of not more than 150 words*.

(4 marks)

Topic One:

In your country, goods and passengers are usually transported together by sea, road, air and railway. Write about the reasons and the risks involved? Give examples.

Topic Two:

Are infrastructures in developing countries (roads, railways, wharfs [quais], etc.) suitable for the use of modern means of transport (cars, trucks, boats, trains)? Give your reasons.

ANSWER KEY

I READING COMPREHENSION

A. MUTIPLE CHOICE QUESTIONS (2 marks : 0.5/item)

1. b
2. c
3. a
4. a

B. TRUE / FALSE (3 marks : 0.25 for T/F ; 0.75 for justification)

5. **False**: Heavy transport helicopters such as Mil Mi-26 …rather difficult. / …a piloted dirigible carrying loads of up to 15O tons over distances as great as 2,000km.
6. **False**: It is ignorant of where the wind happens to be blowing from, which simplifies load handling where the wind is frequently changing direction.
7. **False**: Skylifter craft may yet bring aid to stranded disaster victims – and also to tired and bored millionaires sick of ocean liners.

C. INFORMATION TRANSFER: (2 marks : 0.5/item)

8. **Discus**
9. **Directionless (ignorant of where the wind happens to be blowing from…)**
10. Parachute (greater control during descent)
11. **Flatter than a sphere**
12. **Easier to steer**

D. FINDING INFORMATION (0.5 marks : 0.25/item)

13. 9 tons
14. 20 tons

E. REFERENCING (1.5 marks : 0.5/item)

15. "Transporting large and heavy bits of equipment is difficult; Roads, rivers and railways do not reach everywhere; many cumbersome and heavy objects would need to be hauled in pieces; tighter restrictions on shape and size; the need for runways."
16. "Heavy-transport helicopters, such as the Mil Mi-26 or Sikorsky S-64 Skycrane, address some of these difficulties, but their payloads are limited to 20 and nine tons respectively, and their huge rotors create a powerful downdraft[3] that makes handling that payload rather difficult."
17. Aerostat

II LINGUISTIC COMPETENCE

F. SENTENCE COMPLETION (2.5 marks : 0.5/item)

18. Disastrous
19. Relieved
20. Convenient
21. Comparatively / comparably
22. Speedy

G. REFORMULATION (1.5 marks : 0.5/item)

23. They may **have dropped** the project after a complete analysis of is feasibility.
24. The fully concerted plan will make the opponents **come** together.
25. It's time the new technology **was mastered** for creating infrastructures in remote inaccessible areas.

H. COMPOUND WORDS (1.5 marks : 0.5/item)

26. A perfectly-known system
27. A metal-shaping tool
28. A data-processing software

I. REWRITING (1.5 marks : 0.5/item)

29. **In spite of** the important improvements achieved on the dirigible, it is not all the more safer.
30. **a) Unlike** helicopters, aeroplanes imposed tighter restrictions on the transport of large equipment.
b) Unlike aeroplanes, helicopters didnot impose tighter restrictions on the transport of large equipment.
31. **Providing / provided that** this does not affect its commercial attractiveness, engineers want to reduce the speed of Concorde for environmental reasons.

III. WRITING (4 marks)