

**Comprehension 14: CSS 2009**

**Read the following passage and answers the questions that follow:**

It is in the very nature of the helicopter that its great versatility is found. To begin with, the helicopter is the fulfillment of one of man's earliest and most fantastic dreams. The dream of flying - not just like a bird - but of flying as nothing else flies or has ever flown. To be able to fly straight up and straight down - to fly forward or back or sidewise, or to hover over and spot till the fuel supply is exhausted.

To see how the helicopter can do things that are not possible for the conventional fixed-wing plane, let us first examine how a conventional plane "works." It works by its shape - by the shape of its wing, which deflects air when the plane is in motion. That is possible because air has density and resistance. It reacts to force. The wing is curved and set at an angle to catch the air and push it down; the air, resisting, pushes against the under surface of the wing, giving it some of its lift. At the same time the curved upper surface of the wing exerts suction, tending to create a lack of air at the top of the wing. The air, again resisting, sucks back, and this gives the wing about twice as much lift as the air pressure below the wing. This is what takes place when the wing is pulled forward by propellers or pushed forward by jet blasts. Without the motion the wing has no lift.

**Questions:**

1. Where is the great versatility of the helicopter found?
2. What is the dream of flying?
3. What does the wing of the conventional aircraft do?
4. What does the curved upper surface of the wing do?
5. What gives the wing twice as much lift?

**Answers:**

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### Question 1

Helicopter is versatile in its nature.

The great versatility of ~~power~~ helicopter is that it is able to fly straight up and straight down, forward, and back sides until the fuel ends. These features of flying make a helicopter a versatile object in its nature.

### Question 2

The dream of flying is just to fly in the sky not like a bird but fly with extraordinary

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features. The dream of flying is to flow faster and fly in that way that nature can do.

### ← Question 3 →

The wings of a conventional aircraft deflect air when the plane moves. It gives force in the region of air resistance. Due to resisting push, the plane lifts and fly in the air.

### ← Question 4 →

The curved upper surface of the wing exerts suction and try to create a layer of air at the top of the wing, which resulted in again resisting and sucking back.

### ← Question 5 →

The air is pushed twice as much lift when it sucks back. which resulted in twice lifting of the wing.

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