TASK 5. Make questions for the underlined parts of the sentences below.

1. Composite materials are **widely used** in the Aircraft Industry.
2. Composites have allowed engineers to **overcome many obstacles.**
3. The constituent materials do not **merge completely into each other**.
4. Common composite materials used on airplanes include **fiberglass, carbon fiber, and fiber-reinforced matrix systems or any combination of any of these**.
5. Of all these materials, **fiberglass** is the most common composite material.
6. It was first widely used **in the 1950s**.
7. Aircraft structures are commonly made up of **50 to 70 percent** composite material.
8. Composites will continue to be used with great frequency in the aviation industry **due to their numerous advantages**.

TASK 6. Complete each gap with ONE WORD only to make the text sound logically and grammatically correct.

Advantages

Weight 1) _____ is the single greatest 2) _____ of composite material usage and is the key 3) _____ in using it in aircraft structure. Fiber-reinforced matrix systems are 4) _____ than traditional aluminum found on most aircraft, and they 5) _____ a smooth surface and increase fuel 6) _____, which is a 7) _____ benefit.

Also, composite materials don't corrode as 8) _____ as other types of structures. They don't 9) _____ from metal fatigue and they hold up 10) _____ in structural flexing environments. Composite designs also 11) _____ longer than aluminum, which means 12) _____ maintenance and repair costs.

Disadvantages

Because composite materials don’t 1) _____ easily, that makes it 2) _____ to tell if the interior structure has been 3) _____ at all and this, of course, is the single most 4) _____ disadvantage for using the composite material. In contrast, because of aluminum bends and dents easily, it is quite easy to 5) _____ structural damage. Additionally, repairs can be much more difficult when a composite surface is 6) _____, which ultimately 7) _____ costly.

Also, the resin used in composite material 8) _____ at temperatures as low as 150 degrees, 9) _____ it important for these aircraft to take extra precautions to avoid fires. Fires involved with composite materials can 10) _____ toxic fumes and micro-particles into the air, causing health risks. Temperatures 11) _____ 300 degrees can cause structural 12) _____.

Finally, composite materials can be expensive, although it can be argued that the high initial costs are typically offset by 13) _____ cost savings.