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Q53

Consider the following statements: 1. Carbon fibres are used in the manufacture of components used in automobiles and aircrafts. 2. Carbon fibres once used cannot be recycled. Which of the statements given above is/are correct? (a) 1 only (b) 2 only (c) Both 1 and 2 (d) Neither 1 nor 2 Official key: A.

UPSC Civil Services Prelims 2023 · General Studies · 2 marks · Current Affairs and GK
Current events, government schemes, miscellaneous GK - Prelims GS Paper I.

Explanation**(a) Official key**

1 only. Carbon fibre is used in auto and aircraft parts. It can be recycled, so 2 is false.

(b)

2 only. Recycling routes exist (pyrolysis, solvolysis).

(c)

Both. Statement 2 over-claims.

(d)

Neither. Statement 1 is standard composites use.

Summary

Official key is (a) 1 only. Carbon-fibre composites are widely used in aircraft and high-end automobiles. End-of-life carbon fibre can be recovered; 'cannot be recycled' is false.

Related possible facts

These can be asked in a future Prelims paper.

CFRP

Carbon-fibre reinforced polymer; high stiffness-to-weight.

Pyrolysis recycling

A commercial route to recover carbon fibre from scrap composites.

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