

Read the text and think of the word which best fits each gap.

## ACROSS THE GAP



Some of the (1) \_\_\_\_\_ impressive structures in the world (2) \_\_\_\_\_ bridges. Bridges have to (3) \_\_\_\_\_ built to withstand a variety of forces. These forces come (4) \_\_\_\_\_ a combination of factors: the weight of the bridge, the weight of the traffic, and the strains exerted (5) \_\_\_\_\_ the weather, (6) \_\_\_\_\_ as wind, rain and snow. Bridges are costly (7) \_\_\_\_\_ build and engineers go to a great (8) \_\_\_\_\_ of trouble to ensure that (9) \_\_\_\_\_ are safe, yet use the minimum amount of material. To be (10) \_\_\_\_\_ to do this, they must fully understand the properties of the materials they are (11) \_\_\_\_\_ to use. Certain materials, (12) \_\_\_\_\_ example, are easy to bend. They are flexible. Flexible materials (13) \_\_\_\_\_ be useful in bridge-building but need to be combined (14) \_\_\_\_\_ stiffer materials (15) \_\_\_\_\_ support large load. Stiff materials are difficult to bend but tend to be brittle. Glass, for instance, (16) \_\_\_\_\_ a stiff material but will snap easily if (17) \_\_\_\_\_ try to bend it. Stiff materials can be very hard to compress (18) \_\_\_\_\_ are useful when used (19) \_\_\_\_\_ supporting pillars in bridges.

The property that (20) \_\_\_\_\_ perhaps the most important in bridge-building materials is (21) \_\_\_\_\_ strength to withstand large forces (22) \_\_\_\_\_ breaking. Steel is (23) \_\_\_\_\_ a strong material, which is (24) \_\_\_\_\_ it is often used. Concrete is a stiff material and, (25) \_\_\_\_\_ glass, tends to snap if bending forces (26) \_\_\_\_\_ applied, but it is very strong when compressed. If concrete (27) \_\_\_\_\_ used to support (28) \_\_\_\_\_ bending force, then it must be reinforced (29) \_\_\_\_\_ another material. Steel is usually used (30) \_\_\_\_\_ it is relatively cheap and is good for supporting bending forces.

Adapted from: CAE Practice Tests Plus 1