

- 49.1** 1 misguided, inadequate 3 important, significant 5 unique
 2 ground-breaking 4 crucial
- 49.2** 1 credit, acknowledged, crucial 3 challenged, validity, flawed, limited
 2 borne, mistaken, evidence, flaws 4 viewed, seminal/ground-breaking, ground-breaking
- 49.3** 1 By no means is it certain that all the students will pass their final exams.
 2 He had never before taught such an outstanding student.
 3 Rarely has the country witnessed such a display of public feeling.
 4 We will in no way / We will not in any way be able to halt the process of global warming. / We will not be able to halt the process of global warming in any way.
 5 Under no circumstances will students be allowed to defer the completion of their thesis longer than one month.
 6 Only when we gather a lot more data will we know the answer.
- 49.4** 1 highlights 3 compatible 5 worth recalling, limited
 2 solid 4 comprehensive, key 6 underlines

41.1 Scientists disagree as to whether cold fusion, the controlled power of the hydrogen bomb in the laboratory, is possible. In the past, some believed that **experimental study under laboratory conditions** using palladium and platinum electrodes could in fact cause heavy hydrogen atoms to fuse into helium and release energy, as the sun does. In carefully controlled experiments, researchers believed they could **manipulate** the **variables** arising from the complexity of the electrodes and other equipment used. In such **controlled conditions**, they argued, cold fusion was possible. However, attempts to **replicate** some of the experiments which claimed to be successful failed, and many now believe that cold fusion is in fact theoretically impossible.

Some linguists believe that we can best **determine** how language is processed by laboratory experiments. However, laboratory experiments are by definition **artificial** and may not **reflect** what happens in the real world. Other linguists believe, therefore, that **empirical observation** is better, and prefer to carry out field studies and case studies of individuals in **natural settings**. In this way, in-depth data can be **collected** by observers without **interfering** with the process in any way, even though this may be a more **time-consuming** method. However, individual studies in real situations may not be **representative** of the general **population** of second language learners. In short, both approaches have their advantages and disadvantages.

41.2 carry out: a pilot study / an experiment / a procedure
employ/use: a technique / a device / (a) methodology
a piece of / to assemble / check apparatus
(NB You can also employ/use a procedure.)

- 41.3**
- 1 It was a new **piece** of apparatus so we **assembled** it first and then **checked** it before using it (*or we checked it first and then assembled it*).
 - 2 The team carried out a **pilot study** before conducting the main **experiment** to see if the **methodology/procedure** they were using was reliable.
 - 3 The team needed to employ a different **technique/procedure** for measuring the pressure, so they used a new **device** (*or apparatus*) which they manufactured in their own laboratory. (*If apparatus is used, we can also say 'a new piece of apparatus'.*)

- 41.4**
- 1 It was very difficult to make reliable **inferences** from the data as we had so little.
 - 2 A correlational study is a good way of seeing if one **phenomenon** is related to another in a **systematic** way.
 - 3 The experiment neither proved nor **disproved** Jessop's theory.
 - 4 We had to explain the unusual scores of five of the **subjects** in the sample, who all had totals well below the norm. It was possible there were **inaccuracies** in the data.
 - 5 An **outside** (*or external*) observer can often unintentionally **disrupt** the behaviour of the subjects they are observing.