

one cannot simply **reboot** the human brain and **reload the files and programs**. The problem is that Alzheimer's does not only **erase information**; it destroys the very **hardware** of the brain, which is composed of more than 100 billion nerve cells (neurons), with 100 trillion connections among them.

* *bit* here means a unit of information on a computer that must be either 0 or 1

Unit 10

- 10.1**
- 1 *constant, frequent, intermittent* (going from most frequent to least frequent)
 - 2 A sample chosen by chance is a *random sample* whereas a sample chosen as typical of the population as a whole is a *representative sample*.
 - 3 an *isolated* phenomenon
 - 4 You might prefer your results to be *conclusive*, but *inconclusive results* can also be valuable.
 - 5 A role can also be *pivotal* or *decisive*.
 - 6 *Excess energy* – this suggests that there is extra, whereas *sufficient* just suggests that there is enough.
 - 7 Mother, father and brothers/sisters play an *influential role* in a child's development.
 - 8 listening and writing
- 10.2**
- | | | |
|----------------------|----------------|---------------------|
| 1 came | 3 played | 5 invalidate |
| 2 consumes, generate | 4 investigated | 6 combines/combined |
- 10.3**
- 1 It took the team a long time to devise a way to solve their problem.
 - 2 During the war we had to break off contact with colleagues abroad.
 - 3 There has been a lot of heated debate surrounding the issue of global warming.
 - 4 Ian Hartmann was invited to take on the role of project leader.
 - 5 Part of my role was to collate the results of our experiments.
 - 6 The doctor wanted me to provide a blood sample for analysis.
 - 7 Scientists all over the world contributed to the debate on cloning.
 - 8 A new and unexpected phenomenon seems to be emerging.
 - 9 Using shading helps to differentiate the key elements in a graph.
- 10.4**
- | | |
|---------------------|------------------------|
| 1 taking, random | 5 crucial |
| 2 define | 6 engaging, heated |
| 3 proper, practical | 7 publish, interim |
| 4 maintaining | 8 discern, conflicting |

Unit 11

- 11.1**
- | | |
|--------------------------------|----------------------------------------|
| 1 amount | 4 major/considerable/large/significant |
| 2 particular (or special) | 5 minor/small |
| 3 impact (or influence/effect) | 6 important/significant/interesting |
- 11.2**
- 1 There is **widespread** opposition among students to the idea of longer semesters.
 - 2 The destruction of the riverbank will cause an **inevitable** decline in the numbers of small mammals.
 - 3 School standards are a **common** (or **frequent**) concern among parents nowadays.
 - 4 Nowhere in the article does the author make **explicit** mention of the 20 cases which were never resolved.
 - 5 There is very little **common** ground between the two ways of addressing the problem.
 - 6 The paper is too general and lacks **specific/relevant** examples.

adjective	noun	adjective	noun
significant	significance	important	importance
relevant	relevance	valuable	value
interesting	interest	useful	use
frequent	frequency	broad	breadth

- 11.4 Possible answers**
- 1 of great/considerable relevance
 - 2 of great/considerable value
 - 3 of huge/enormous importance
 - 4 a work of great breadth
 - 5 a work of great/huge/enormous/considerable significance
 - 6 of considerable use
 - 7 of great/considerable interest
 - 8 of high frequency

Unit 12

- 12.1**
- 1 convincingly demonstrated / demonstrated convincingly
 - 2 observed earlier / earlier observed
 - 3 specifically refers / refers specifically
 - 4 is closely identified
 - 5 briefly discusses
 - 6 firmly establishes
 - 7 loosely based
 - 8 critically examine

- 12.2 Suggested answers**
- | | | |
|------------------|-------------------------|--------|
| 1 hypotheses | 3 causes/origins/nature | 5 need |
| 2 trends/changes | 4 issue/question | |

- 12.3 Possible answers**
- 1 interpretation, approach, solution, methodology, theory, etc.
 - 2 threat, challenge, problem, question, dilemma, danger, menace, risk, etc.
 - 3 facts, evidence, causes, issues, reasons, etc.

- 12.4 Suggested answers**
- The world is facing a looming water crisis. Disputes over allocation have steadily increased in the last decade, and demand has grown rapidly. Water is likely to generate the same degree of controversy in the 21st century as oil did in the 20th. If we take no action now, new conflicts are likely to occur periodically around the world. At the moment, instead of seeking solutions which directly address multiple needs, countries focus a little too narrowly on local issues and typically opt for expensive and inferior solutions. What is needed are decisions which can be quickly implemented and a debate which will seriously consider more than the short term needs of individual states.

- 12.5**
- 1 directly address
 - 2 consider seriously / seriously consider
 - 3 steadily increasing (Although *growing rapidly* might also be possible here, it is less likely given the time period in the sentence.)
 - 4 focuses/focused narrowly / narrowly focuses/focused
 - 5 quickly implemented / implemented quickly

Unit 13

- 13.1**
- | | |
|--------------------------------------|-----------------------------|
| 1 in line with | 5 With the exception of |
| 2 at this stage | 6 on the basis of |
| 3 on the one hand, on the other hand | 7 on the whole, in terms of |
| 4 In addition to | 8 on behalf of |

- 13.2**
- 1 The conclusions are fair in most respects, though some are questionable.
 - 2 Dr Carr's team got the grant, in spite of being the smallest team to apply.
 - 3 We had little money to spare; in other words, we were underfunded.