AGEING: THE GIRLS WHO NEVER GROW OLDER

(1) Richard Walker has been trying to conquer ageing since he was a 26-year-old free-loving hippie. It was the 1960s, an era marked by youth: Vietnam War protests, psychedelic drugs, sexual revolutions. The young Walker relished the culture of exultation, of *joie de vivre*, and yet was also acutely aware of its passing. He was haunted by the knowledge that ageing would eventually steal away his vitality – that with each passing day his body was slightly less robust, slightly more decayed. One evening he went for a drive in his convertible and vowed that by his 40th birthday, he would find a cure for ageing.

(2) Walker became a scientist to understand why he was mortal. "Certainly it wasn't due to original sin and punishment by God, as I was taught by nuns in catechism," he says. "No, it was the result of a biological process, and therefore is controlled by a mechanism that we can understand." Scientists have published several hundred theories of ageing, and have tied it to a wide variety of biological processes. But no one yet understands how to integrate all of this disparate information.

(3) Walker, now 74, believes that the key to ending ageing may lie in a rare disease that doesn't even have a real name, "Syndrome X". He has identified four girls with this condition, marked by what seems to be a permanent state of infancy, a dramatic developmental arrest. He suspects that the disease is caused by a glitch somewhere in the girls' DNA. His quest for immortality depends on finding it.

(4) When Walker began his scientific career, he focused on the female reproductive system as a model of "pure ageing": a woman's ovaries, even in the absence of any disease, slowly but inevitably slide into the throes of menopause. His studies investigated how food, light, hormones and brain chemicals influence fertility in rats. But academic science is slow. He hadn't cured ageing by his 40th birthday, nor by his 50th or 60th. His life's work was tangential, at best, to answering the question of why we're mortal, and he wasn't happy about it. He was running out of time. So he went back to the drawing board. As he describes in his book, *Why We Age*, Walker began a series of thought experiments to reflect on what was known and not known about ageing.

Easy

1. Find and comment on **<u>at least three</u>** instances of verbal stem allomorphy in the first two paragraphs.

2. In the first two sentences of the first paragraph, find three words which contain different stressed back monophthongs and transcribe them phonemically.

3. Indicate all suppletive forms in the 4th paragraph and describe the phenomenon of suppletion.

Medium

1. Compare and discuss the following two phrases from the point of view of their semantics, morphology and syntax: *its passing* (paragraph 1) and *punishment by God* (paragraph 2).

2. In paragraph 1, find at least one content (appositive) *that*-clause and in a couple of sentences explain how it differs in terms of semantics and syntax from relative *that*-clauses.

3. Discuss the genitive meanings expressed in the following noun phrases: *the girls' DNA* (par. 3), *a woman's ovaries* (par. 4) and *his life's work* (par. 4). Give appropriate sentential or phrasal analogues of each phrase.

Challenging

1. Discuss the syntactic and information structure of the sentence beginning with *When Walker began his scientific career,…* in paragraph 4, then relate those to textual function(s).

2. Analyse the following structures from paragraph 3: *Walker, now 74,* and *a rare disease that doesn't even have a real name, "Syndrome X"*. Contrast them in terms of internal constituency and function within the units that contain them. Comment on the differences between apposition and modification.

3. Discuss the syntactic behaviour and distribution of all the adjectives you can find in paragraph 1. Group the adjectives according to the their function and use and comment on possible classifications and criteria for these.