

Marks

Question 31 — The Human Story (25 marks)

- (a) (i) Name ONE significant hominid fossil. **1**
- (ii) Describe TWO structural features of this fossil that would identify it as a primate. **2**
- (iii) Use ONE of the features you described in part (ii), to compare humans with apes. **2**
- (b) Theories of hominid evolution have been developed by anthropologists such as the Leakey family, Johanson, Broom, Tobias, Dart and Goodall.
- (i) Describe ONE major discovery made by ONE of the above scientists that has added to our knowledge of hominid evolution. **3**
- (ii) Explain how this discovery increased understanding of hominid evolution. **3**
- (c) The data shows the radioactive decay of carbon 14 (C^{14}) over time.

<i>Time (years)</i>	<i>Fraction of original radioactivity (%)</i>
0	100
5 000	54
10 000	29
15 000	16
20 000	8
25 000	5
30 000	2
35 000	1

- (i) Graph the data on the graph paper provided on page 33. **4**
- (ii) A fossil sample was found to contain 40% of its original radioactivity. Estimate the age of the fossil. **1**
- (iii) Explain why measurement of carbon 14 (C^{14}) content in a hominid fossil may not be a useful radiometric dating technique. **2**
- (d) Cultural development has been a significant feature of human evolution. **7**

Discuss the complex cultural development of humans in comparison with other primates.