

MARKS

5

- Suppose that you are investigating the relationship between political attitudes and length of hair among male university students. You will measure political attitudes with a standard questionnaire; indicate briefly how you will measure hair length. Give clear instructions *in point form* that your assistant can follow, including a statement of the *units* of measurement and the *measuring instrument*.

 Units

 Measuring instrument

MARKS

4

(2, 2)

- All the members of a physical education class are asked to measure their pulse rate as they sit in a classroom. The students use several methods, among which are:

Method 1: count heart beats for 6 seconds and multiply by 10 to get beats per minute;

Method 2: count heart beats for 30 seconds and multiply by 2 to get beats per minute.

- Which method is likely to yield a more accurate measurement? Explain briefly.
- One student proposes **Method 3:** starting exactly on a heart beat, measure the time for the next 50 beats and then convert this time into beats per minute. Is Method 3 likely to yield a more or less accurate measurement than 1 and 2? Explain briefly.

(a)

(a)
 Method preferred

(b)

(b)
 More or Less