

Marks

Question 18 (4 marks)

Investigators gathered data on a group of 100 smokers for a period of 10 years. During this time 12 people in the group developed lung cancer, two died in traffic accidents, and three died of heart attacks. The investigators used this data to state that smoking caused lung cancer.

4

Describe how this investigation could be improved.

Smoking is something that causes mutations in DNA. By investigating the morbidity and mortality rates their conclusions would improve. Peoples lifestyles due to smoking may be very different after more yrs than 10. Different people in different areas will have different tendencies and they also can be investigated. Promotions on smoking would have an interesting effect and may cause some to stop, during the 10yr period.

How much they smoked and how strong the cigarettes were? And also what DNA did they pass onto the next (F<sub>2</sub>) generation? Did they inherit the mutated genes.