

A Level Biology B

H422/01 Fundamentals of biology

Question Set 14

1. (a) The process of gas exchange involves several specialised cell types.

Fig. 37.1 shows a human bronchiole and surrounding alveoli under a light microscope. Two cell types are labelled **R** and **S**.



Fig. 37.1

Complete the table below by inserting, for each cell type:

- the **precise** name
- **one** role in gas exchange.

Cell type	Name	Role
R
S

- (b) (i) A health campaign was launched to help people to give up cigarette smoking.

Fig. 37.2 is a graph that featured in the campaign.

Lung function is represented as a percentage of FEV₁ at the age of 25 years.

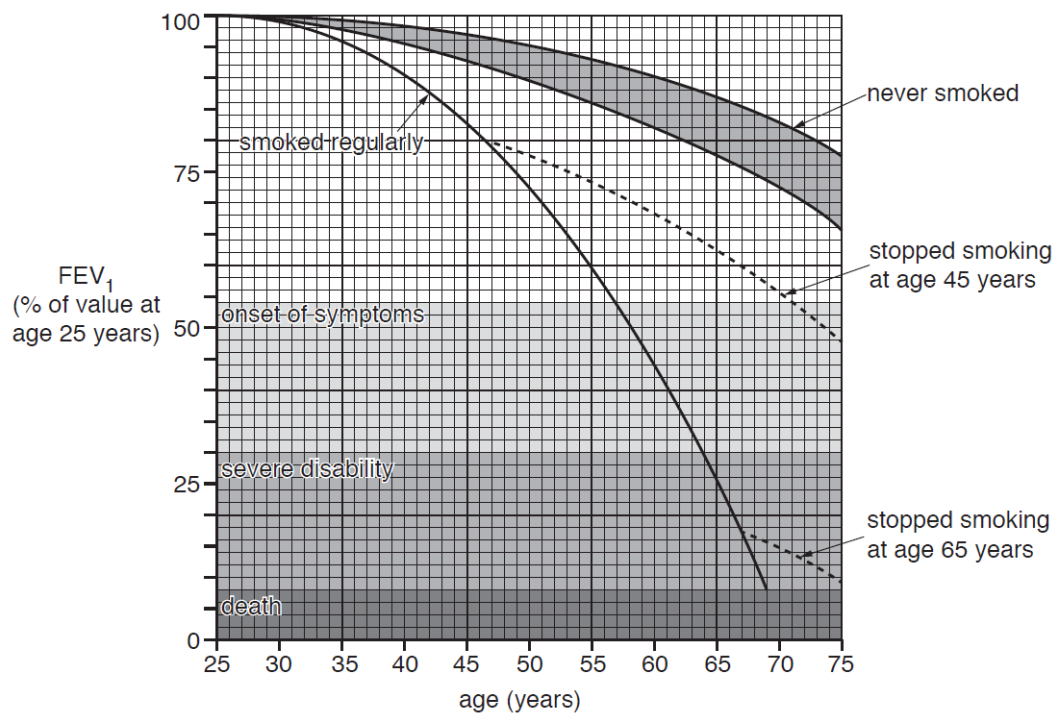


Fig. 37.2

The health campaign claimed that giving up cigarette smoking improves quality of life and prevents smoking-related death.

Evaluate this claim using the data from the graph in Fig. 37.2.

[3]

- (b) (ii) During the campaign, doctors warned that the graph in Fig. 37.2 could not accurately predict the lung function of **individual** cigarette smokers over time.

Suggest **two** reasons why.

[2]

- (c) Cigarette smoking increases an individual's risk of a heart attack.

A heart attack can lead to respiratory arrest.

Describe how expired air resuscitation is performed to manage an adult in respiratory arrest.

[3]

Total Marks for Question Set 14: 12

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