MARKS

6

(4, 2)

5. In a large population of laboratory rats, 20% have long tails and 60% have brown coats; also, 25% have neither of these two traits.

(a) Find the proportion of the rats that have *both* these traits.

(b) Can the two traits 'long tail' and 'brown coat' reasonably be modelled as being *probabilistically independent*? Answer *Yes* or *No* and then justify your answer.

(a)

```
┌──────────────┐
│              │ (a)
└──────────────┘
   Proportion
```

(b)

```
┌──────────────┐
│              │ (b)
└──────────────┘
   Yes or No
```