

3. Joe wants to compare Daily Mean Total Cloud Cover (oktas), on any given day, in Leeming and Camborne.

Joe takes a sample of the 2015 data from the large data set for each of these two locations.

- (a) (i) Describe how a **systematic** sample of 30 cloud cover readings could be taken from the large data set for Leeming in 2015.

(2)

- (ii) Explain briefly how the sample for Camborne should now be taken.

(1)

Joe believes that locations further from the coast have greater levels of cloud cover than locations nearer to the coast.

Joe's data shows a mean cloud cover of

- 5.0 oktas for Leeming
- 5.4 oktas for Camborne

- (b) State, giving a reason, whether these statistics are consistent with Joe's belief.

(2)

Joe wishes to model cloud cover, in oktas, as a discrete random variable.

- (c) State

- a possible distribution Joe could use for this model
- an assumption required for this distribution to be suitable

(2)