11. The global yearly energy output from onshore wind farms was first measured in 1996. The equation

$$E = ab^t \qquad \text{where } a \text{ and } b \text{ are constants}$$

models the global yearly energy output, E gigawatts (GW), from onshore wind farms t years after 1996.

Given that the global yearly energy output from onshore wind farms was

- 74 GW in 2006
- 198 GW in 2010

(a) (i) find the value of b to 3 decimal places,

(ii) find the value of a to one decimal place.

(4)

(b) With reference to the model

(i) interpret the value of a,

(ii) interpret the value of b.

(2)

Using the model,

(c) find the predicted global yearly energy output from onshore wind farms in 2025.

(2)