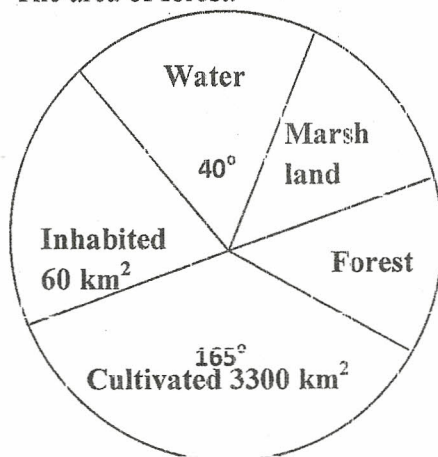(c) Four items are taken at random from a box of 12 items and inspected. The box is rejected if more than 1 item is found to be faulty. If there are 3 faulty items in the box, find the probability that the box is accepted.

3 Marks

5. (a) The pie chart, which is not drawn to scale, shows the distribution of types of land in a small part of Akure. It is also known that the area covered by marshland and forest can be considered equal. Calculate:
  i. The area covered by water.
  ii. The angle for the inhabited sector.
  iii. The total area of land surveyed.
  iv. The area of forest.

6 Marks

(b) A random variable X has the probability distribution given in the table below, and **2Y=X-18**. Find
  (i) $E(Y)$ and $E(Y^2)$
  (ii) Deduce the values of $E(X)$ and Var (X).

6 Marks

Total $^{12}C_4 \cdot 1$

$@ \dfrac{60}{3360} \times 360$

water $= \dfrac{40}{360}$

$= \dfrac{\theta}{360}$

$x = 40$

$x = 3360$

$\dfrac{\theta}{360}$ $\dfrac{60}{3}$

$40 = 360$

GOOD LUCK!!!

$x =$ $^4C_1 \cdot 12 = \dfrac{4 \times 3 \times 2 \times 1}{1} = 24$

3 $^3C_0 \cdot 12$

$3360 = x$

$\dfrac{x}{360} \times 360 = 40$

$\dfrac{x}{3360} \times 360 = 40$

$36x =$