



* Load $\Rightarrow I = \frac{V}{R} = \frac{12}{3.3} = 3.636 A$
 $= 3636 \text{ mA}$

* Capacity of battery = 5200 mAh
 but calculations will be on 80% of the capacity
 so capacity = 4160 mAh

* time of discharge = $\frac{\text{Capacity}}{\text{Load}} = \frac{4160}{3636} = 1.14 \text{ hours}$
 for 1 battery

\Rightarrow so for 5 hours we will use 5 batteries
 which will discharge by 80% after
 5.7 hours

$\hookrightarrow 1.14 \times 5 = 5.7 \text{ hours}$