(6)

$$
A_{m p} t=\frac{60-40}{2}=10
$$

$$
\begin{aligned}
& \text { max- } 60 \mathrm{~cm} \\
& \mathrm{~min}-40 \mathrm{~cm} \\
& \min -40 \mathrm{~cm} \quad \text { V.s }=\frac{60+40}{2}=50 \\
& \text { Per= } 3.3-.3=3 \mathrm{sec} \\
& \begin{array}{ll}
y=10 \cos \left(\frac{2 \pi}{3} t-c\right)+50 & 3=\frac{2 \pi}{k} \\
60=10 \cos \left(\frac{2 \pi}{3}(.3)-c\right)+50 & k=\frac{2 \pi}{3} \\
10=10 \cos \left(\frac{.6 \pi}{3}-c\right) &
\end{array} \\
& \begin{array}{ll}
y=10 \cos \left(\frac{2 \pi}{3} t-c\right)+50 & 3=\frac{2 \pi}{k} \\
60=10 \cos \left(\frac{2 \pi}{3}(.3)-c\right)+50 & k=\frac{2 \pi}{3} \\
10=10 \cos \left(\frac{-6 \pi}{3}-c\right) &
\end{array} \\
& \begin{array}{ll}
y=10 \cos \left(\frac{2 \pi}{3} t-c\right)+50 & 3=\frac{2 \pi}{k} \\
60=10 \cos \left(\frac{2 \pi}{3}(.3)-c\right)+50 & k=\frac{2 \pi}{3} \\
10=10 \cos \left(\frac{.6 \pi}{3}-c\right) &
\end{array} \\
& \begin{array}{l}
1=\cos \left(\frac{.6 \pi}{3}-c\right) \\
\cos ^{-1}(1)=-\frac{6 \pi}{3}-c
\end{array} \\
& \cos ^{-1}(1)=\frac{6 \pi}{3}-c \\
& 0=\frac{.6 \pi}{3}-c \\
& c=\frac{.6 \pi}{3} \approx .628 \\
& \left\{\begin{array}{l}
\bar{y}=10 \cos \left(\frac{2 \pi}{3} t-.628\right)+50 \\
y=10 \sin \left(\frac{2 \pi}{3} t+.942\right)+50
\end{array}\right.
\end{aligned}
$$

J anuary 292013 6th.gwb - 2/2 - Tue J an 292013 12:53:05


