Solution of No. 2

$$
\begin{gathered}
\because \quad V_{n m s}=\frac{4 V_{d c}}{n \sqrt{2} \pi} \sin \left(\frac{n S}{2}\right) \\
V_{\text {irms }}=\frac{4 V_{d c}}{\sqrt{2} \pi} \sin \left(\frac{5}{2}\right) \\
\frac{70}{100} \cdot V_{d c}=\frac{4 V_{d c}}{\sqrt{2} \pi} \sin \left(\frac{S}{2}\right) \\
\therefore \quad \frac{S}{2}=51.0 V_{d c} \\
\delta=102.07^{\circ}
\end{gathered}
$$

Solution of No. 14
(a)

$$
V_{\text {orms }}=V_{s} \sqrt{\frac{P S}{\pi}}=220 \sqrt{\frac{5 * 30}{180}}=200.83 \mathrm{~V}
$$

$$
\begin{aligned}
& \text { (d) } V_{\text {orms }}=V_{S} V \pi \\
& \text { (b) } . ~ \\
& S=35^{\circ}, \ldots \text { Vorms }_{\text {(b) }}=V_{\text {orms }}(\text { a) }
\end{aligned}=200.83 \mathrm{~V} \longrightarrow V_{s}=\text { ? }
$$

$$
\because \quad V_{\text {coms }}=V_{s} \sqrt{\frac{P \delta}{\pi}}
$$

$$
200.83=V_{s} \sqrt{\frac{5 * 35}{\pi}}
$$

$$
\begin{aligned}
& 200.83=\sqrt{s} \sqrt{\pi} \\
& \therefore \quad V_{s}=2003.68 \mathrm{~V}
\end{aligned}
$$

$$
\begin{gathered}
\therefore V_{s}=2003.00 \quad, \quad V_{\text {orms }}=V_{s m s} \text { ma } \\
(C): V_{s}=220+10 \%(220)=242 \mathrm{~V}, \rightarrow \delta=? \\
V=V_{s} \sqrt{\frac{p s}{\pi}}
\end{gathered}
$$

$$
\because V_{o m s}=V_{s} \sqrt{\frac{p s}{\pi}}
$$

$$
200.83=242 \sqrt{\frac{5 * \delta}{\pi}}
$$

$$
\therefore \quad \delta=24.79
$$

Gating Signal.... For T1


Gating Signal.... For T2


Gating Signal.... For T3


Gating Signal.... For T4


Vo \& lo


Gating Signal.... For T1


Gating Signal.... For T2


Gating Signal.... For T3


Gating Signal.... For T4


Vo \& 10



Gating Pulses ... T4


Gating Pulses ... T2


Gating Pulses ... T3


Vo \& lo




Gating Signals For ... T3 \& T4


Vo \& lo


