$$y_0 = \underbrace{(x_0 \wedge x_1)}_{\text{Neccessarily true}} \wedge \underbrace{(\underbrace{(\neg x_2 \wedge x_3)}_{\text{Conjunction}} \vee \underbrace{(x_2 \wedge x_3)}_{\text{Conjunction}} \vee \underbrace{(x_2 \wedge \neg x_3)}_{\text{Conjunction}} \vee \underbrace{(\neg x_2 \wedge \neg x_3)}_{\text{Conjunction}})}_{\text{Disjunction}} \tag{1}$$

$$y_1 = \underbrace{(x_0 \wedge x_1)}_{\text{Neccessarily true}} \wedge \underbrace{(\underbrace{(\neg x_2 \wedge x_3)}_{\text{Conjunction}} \vee \underbrace{(x_2 \wedge x_3)}_{\text{Conjunction}} \vee \underbrace{(x_2 \wedge \neg x_3)}_{\text{Conjunction}})}_{\text{Disjunction}} \tag{2}$$

$$y_2 = \underbrace{(x_0 \wedge x_1)}_{\text{Neccessarily true}} \wedge \underbrace{(\underbrace{(\neg x_2 \wedge x_3)}_{\text{Conjunction}} \vee \underbrace{(x_2 \wedge x_3)}_{\text{Conjunction}} \vee \underbrace{(x_2 \wedge \neg x_3)}_{\text{Conjunction}})}_{\text{Disjunction}} \tag{3}$$

$$y_3 = \underbrace{(x_1 \wedge x_0 \wedge x_3)}_{\text{Neccessarily true}} \wedge \underbrace{(\neg x_2 \vee x_2)}_{\text{Disjunction}} \tag{4}$$

$$y_4 = \underbrace{(x_0 \wedge x_1)}_{\text{Neccessarily true}} \wedge \underbrace{(\underbrace{(\neg x_2 \wedge x_3)}_{\text{Conjunction}} \vee \underbrace{(x_2 \wedge \neg x_3)}_{\text{Conjunction}} \vee \underbrace{(x_2 \wedge x_3)}_{\text{Conjunction}})}_{\text{Disjunction}} \tag{5}$$

$$y_5 = \underbrace{\neg x_2}_{\text{Neccessarily false}} \wedge (\underbrace{x_0 \wedge x_3 \wedge x_1}_{\text{Neccessarily true}}) \tag{6}$$

$$y_6 = \underbrace{\neg x_3 \wedge \neg x_0 \wedge \neg x_1 \wedge \neg x_2}_{\text{Neccessarily false}} \tag{7}$$