5. $f^3(x) = (x_2 \oplus \bar{x}_3) \downarrow (x_1 \bar{x}_2)$

$= (\bar{x}_2 \bar{x}_3 \vee x_2 x_3) \downarrow (x_1 \bar{x}_2)$

$= \overline{(\bar{x}_2 \bar{x}_3 \vee x_2 x_3) \vee (x_1 \bar{x}_2)}$

$= \overline{\bar{x}_2 \bar{x}_3 \vee x_2 x_3} \cdot \overline{x_1 \bar{x}_2}$

$= [(x_2 \vee x_3)(\bar{x}_2 \vee \bar{x}_3)] \{\bar{x}_1 \vee x_2)$

$= (x_2 \vee x_3)(\bar{x}_2 \vee \bar{x}_3)(\bar{x}_1 \vee x_2)$ ДКНФ

$= (x_2 \bar{x}_3 \vee \bar{x}_2 x_3)(\bar{x}_1 \vee x_2)$

$= \bar{x}_1 x_2 \bar{x}_3 \vee \bar{x}_1 \bar{x}_2 x_3 \vee x_2 \bar{x}_3$ (СДНФ)

Ombem: $(x_2 \vee x_3)(\bar{x}_2 \vee \bar{x}_3)(\bar{x}_1 \vee x_2) \Rightarrow$ КНФ

$\bar{x}_1 x_2 \bar{x}_3 \vee \bar{x}_1 \bar{x}_2 x_3 \vee x_2 x_3 \Rightarrow$ СДНФ

б