

From the bdd of $Dff(g9|g5)$, we can see that it's not equal to constant. From the function of $g9$, we can see that

$$g9 = f * g8 * g5 = f(abd + bcd + abc'e)(bd + c'e)$$

and when $g5 = 0$:

$$g9 = f * g8 * 0 = 0$$

$$\text{So } Dff(g9|g5) = g9|_{g5=1} \oplus g9|_{g5=0} = g9|_{g5=1}$$

When $g5 = 1$, implying $bd = 1$ or $c'e = 1$, so:

$$g9|_{g5=1} = g9|_{bd=1} + g9|_{c'e=1} = (af + cf) + (abf) = af + cf$$

So we can know the new condition to conjunct is $af + cf \equiv 0$, which is

$$(af + cf)' = f' + a'c'$$

To verify this with bdd, we create the bdd of $f' + a'c'$, $Dff(g9|g5)$, and the conjunct of the two, we can see that the result become a constant 0, which means $f' + a'c'$ is indeed the missing condition to make $Dff(g9|g5)$ a constant 0.



