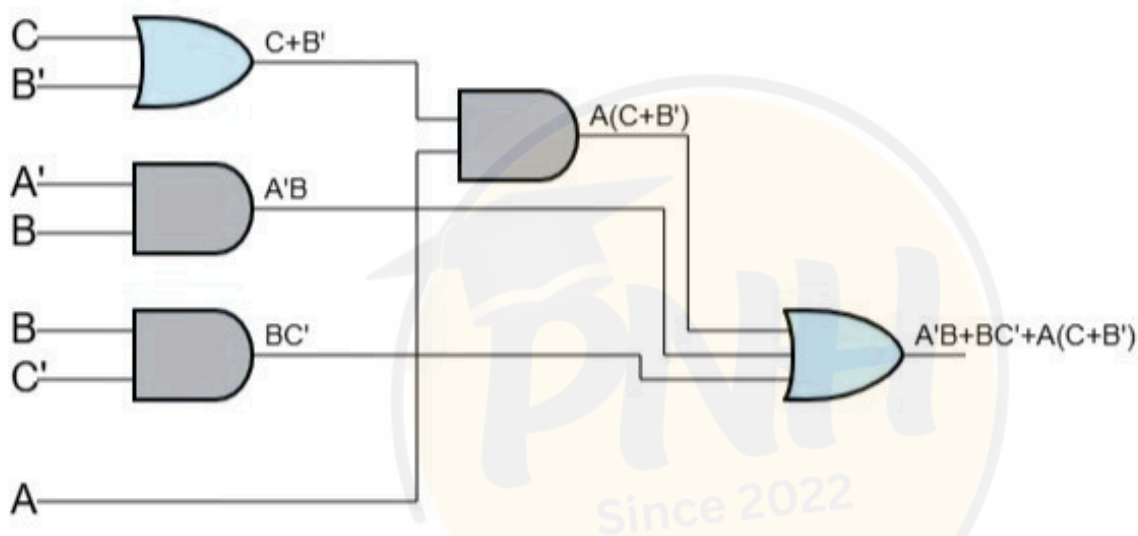


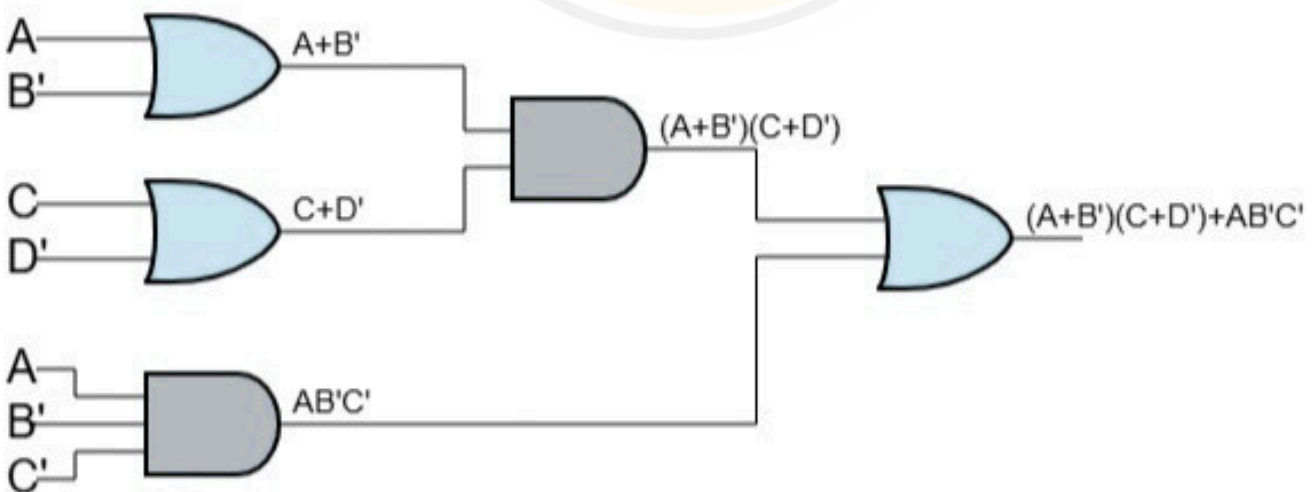
## Realise Boolean or Logic Expressions using basic logic gates.

Medium-Complexity (3–4 variables)

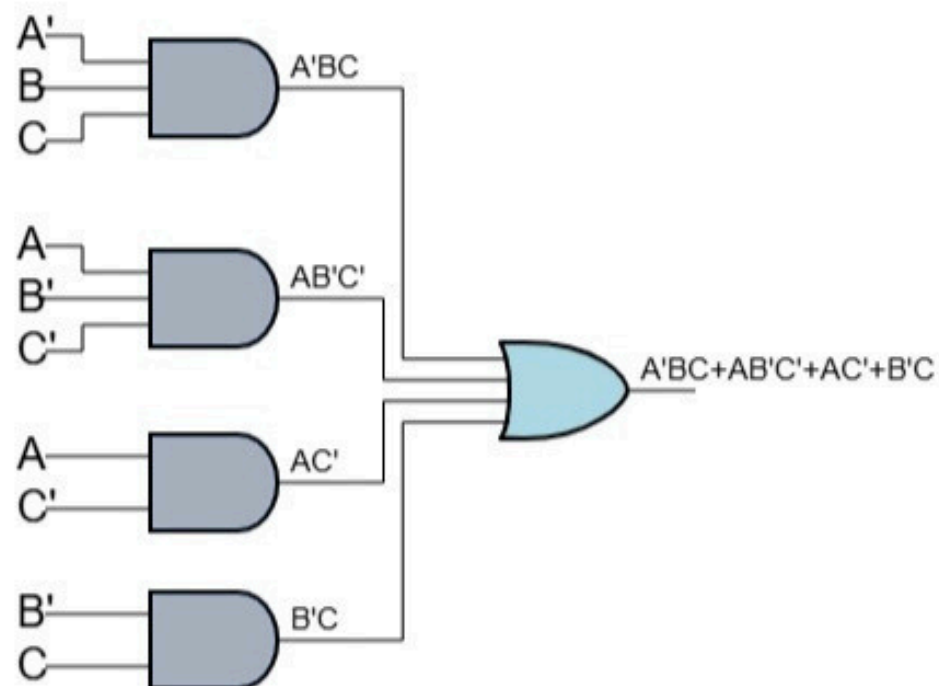
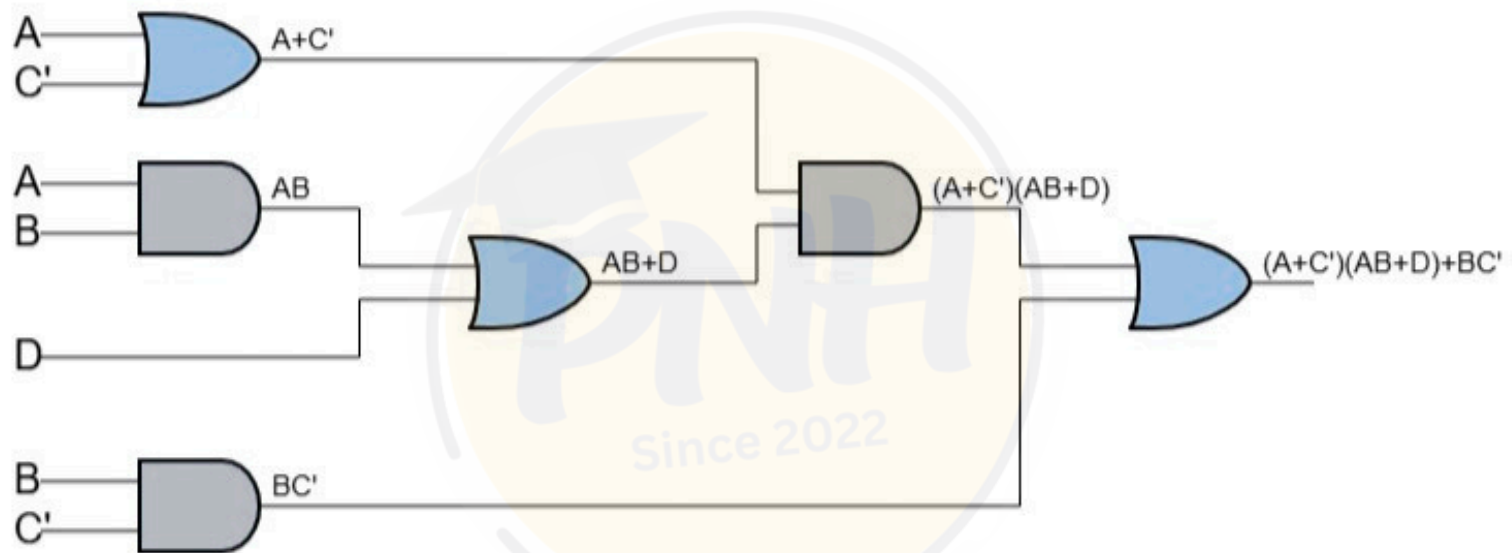
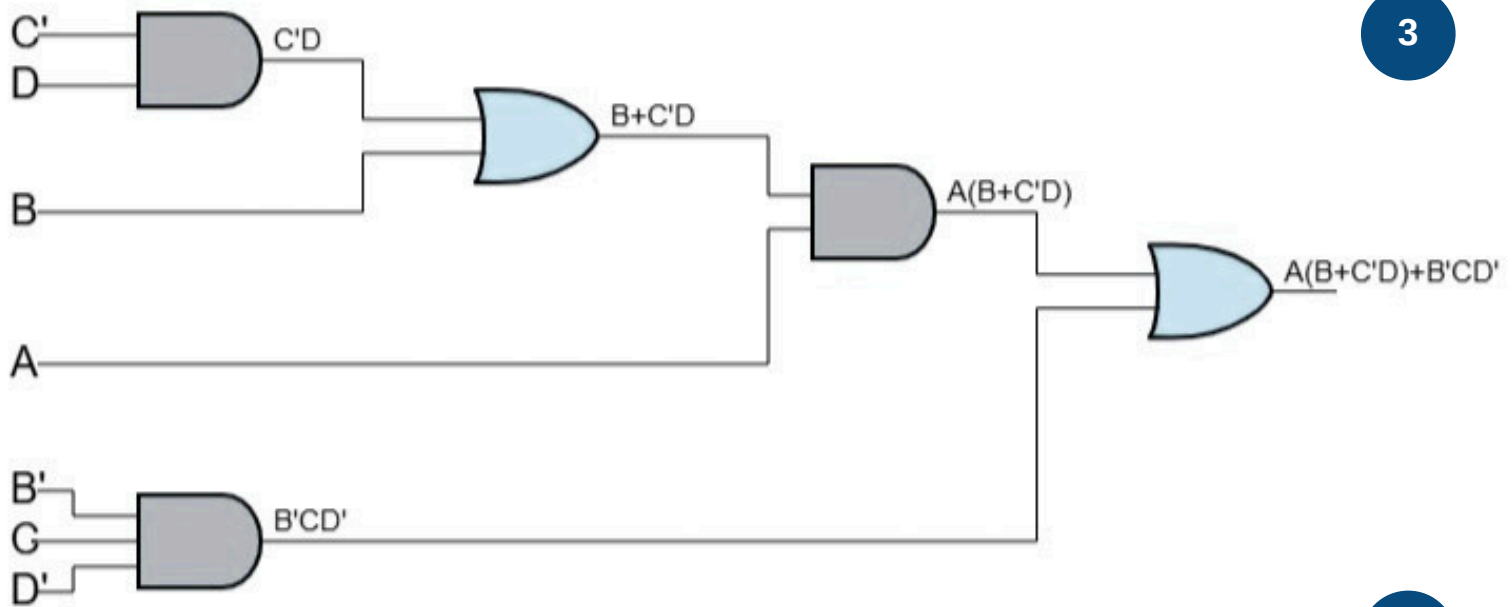
1.  $Y = \bar{A}B + B\bar{C} + A(C + \bar{B})$
2.  $Y = (A + \bar{B})(C + \bar{D}) + A\bar{B}\bar{C}$
3.  $Y = A(B + \bar{C}D) + \bar{B}C\bar{D}$
4.  $Y = (A + \bar{C})(AB + D) + \bar{B}C$
5.  $Y = \bar{A}BC + A\bar{B}\bar{C} + A\bar{C} + \bar{B}C$



1

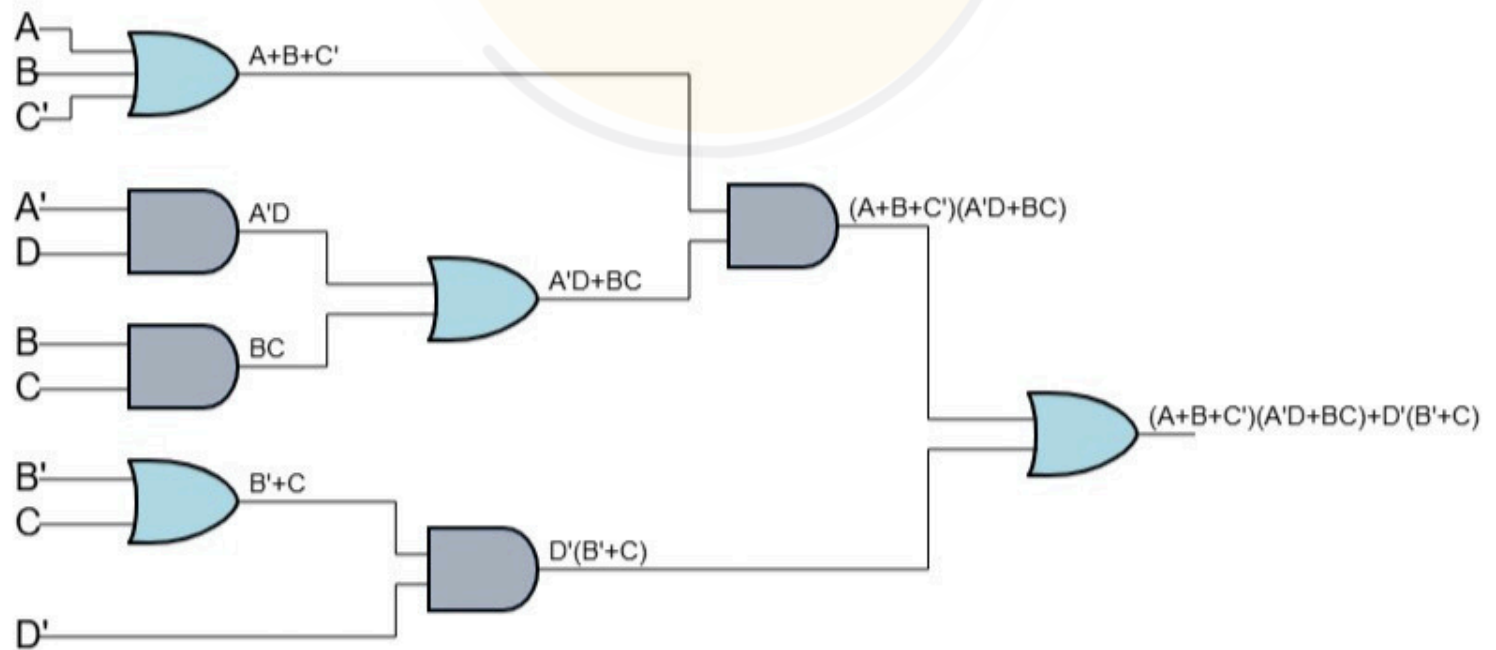
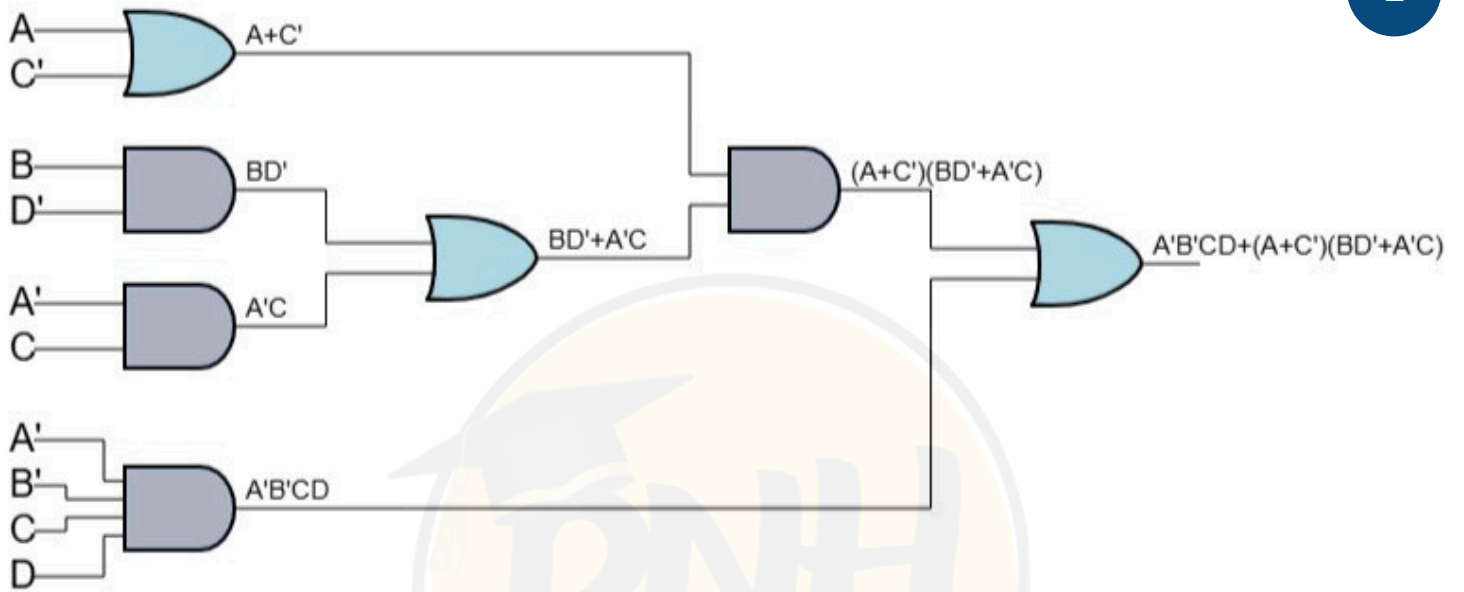


2

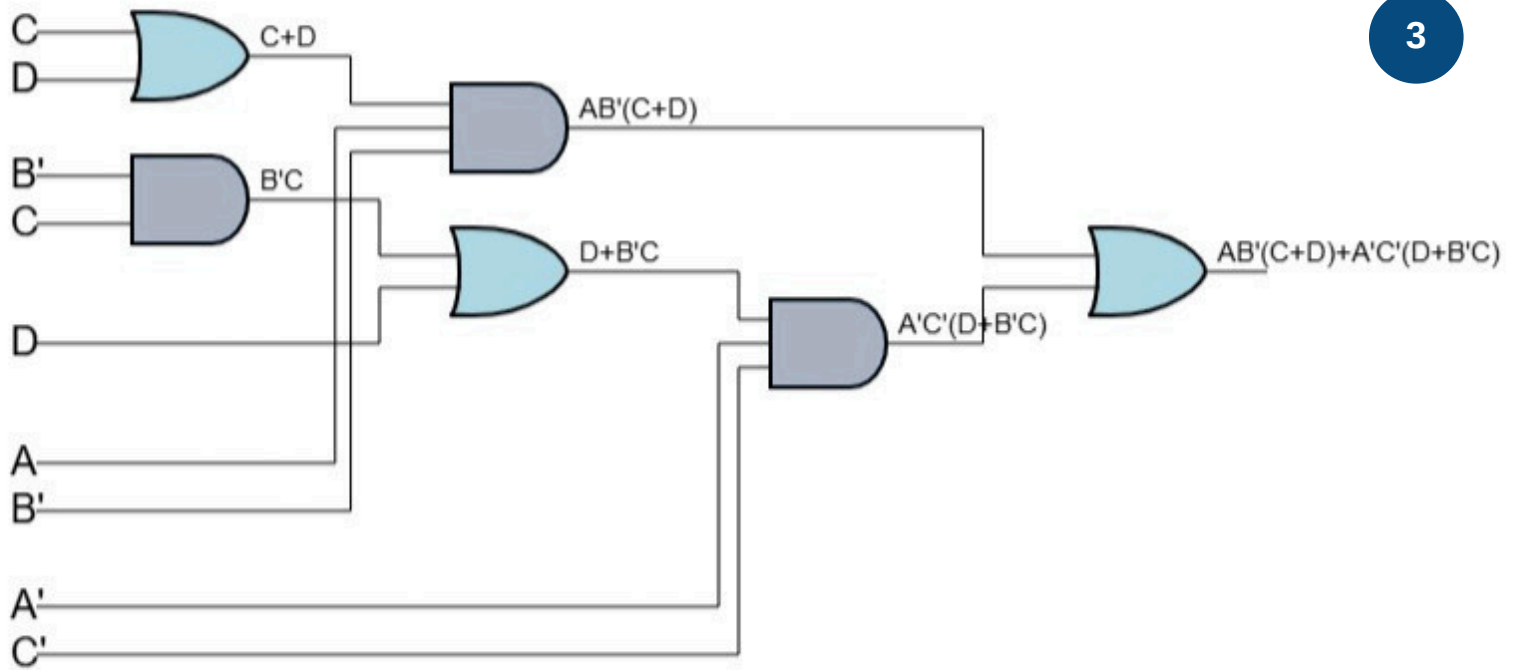


## Harder (4–5 variables)

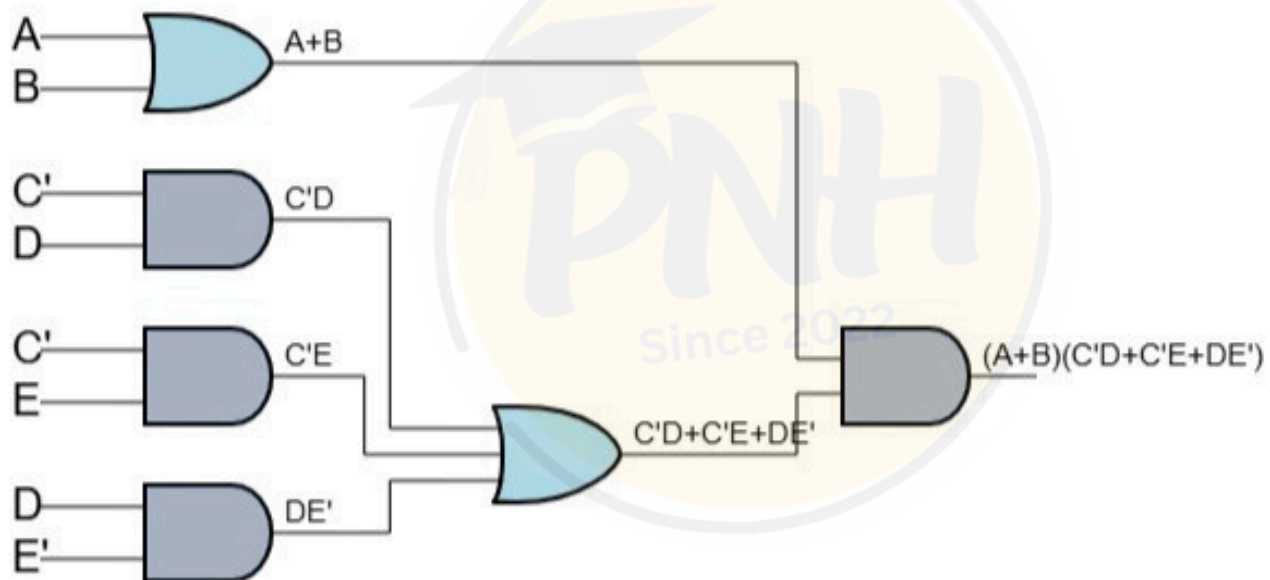
1.  $Y = \overline{A}\overline{B}CD + (A + \overline{C})(B\overline{D} + \overline{A}C)$
2.  $Y = (A + B + \overline{C})(\overline{A}D + BC) + \overline{D}(\overline{B} + C)$
3.  $Y = A\overline{B}(C + D) + \overline{A}\overline{C}(D + \overline{B}C)$
4.  $Y = (A + B)(\overline{C}D + \overline{C}E + D\overline{E})$
5.  $Y = \overline{A}B(C + \overline{D}E) + CE(A + \overline{B}D)$



3



4



5

