⑥ a) $F = (((A'B)' + B)' + B)C$ Given

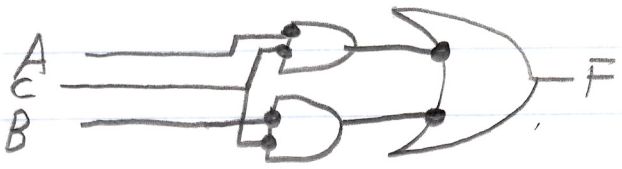
$(((A + B') + B)' + B)C$ De Morgan's

$((A + (B' + B) + B)C$ Associative

$((A + B)C)$ Complementarity

Distributive

$$F = AC + BC$$



⑥ b) $((A+B)' + (BC))' + (CB)'$ Given

$(A'B' + BC)' + (C' + B')$ De Morgan's

$[(A + B)(B' + C')] + (C' + B')$ De Morgan's

$(AB + AC' + BB' + BC') + (C' + B')$ Distributive

$(AB + AC' + BC') + (C' + B')$ Complementarity

$(AB + AC') + (BC' + C') + B'$ Associative

$(AB + AC') + C'(B + 1) + B'$ Distributive

$(AB + AC') + C'B + B'$ Identity

$$AB + AC' + C'B + B'$$