$$C(e_1 \text{ and } e_2) \stackrel{\text{def}}{=}$$
```
                  C(e1)
                  call P_test
                  testq %rax, %rax
                  jz L_skip
                  C(e2)
       L_skip:
```

$$C(e_1 \text{ or } e_2) \stackrel{\text{def}}{=}$$
```
                  C(e1)
                  call P_test
                  testq %rax, %rax
                  jnz L_skip
                  C(e2)
       L_skip:
```

where L_skip is a new label.

$$C(\texttt{if } (e)\colon s_1 \texttt{ else}\colon s_2) \overset{\text{def}}{=}$$

```
C(if (e): s₁ else: s₂) =def  C(e₁)
                             call P_test
                             testq %rax, %rax
                             jz L_else
                             C(s₁)
                             jmp L_end
                  L_else:
                             C(s₂)
                  L_end:
```

where `L_else` and `L_end` are new labels.

$$C(e_1 == e_2) \stackrel{\text{def}}{=} \quad C(e_1)$$

```
                 pushq %rdi
```
$$\qquad\qquad\quad C(e_2)$$
```
                 movq %rdi, %rsi
                 popq %rdi
                 call P_equal
                 testq %rax, %rax
                 sete %al
                 movq $C_True, %rdi
                 movq $C_False, %rsi
                 testb %al, %al
                 cmovz %rsi, %rdi
```