

CSE 311: Foundations of Computing I

Section: Logic

Exclusive Or

For each of the following, decide whether inclusive or or exclusive or is intended:

- (a) Experience with C or Java is required.

- (b) Lunch includes soup or salad.

- (c) Publish or perish

- (d) To enter the country you need a passport or voter registration card.

Translations

For each of the following, define propositional variables and translate the sentences into logical notation.

- (a) I will remember to send you the address only if you send me an e-mail message.

- (b) If berries are ripe along the trail, hiking is safe if and only if grizzly bears have not been seen in the area.

Truth Tables

(a)

$$(p \oplus q) \vee (p \oplus \neg q)$$

(b)

$$(p \vee q) \rightarrow (p \oplus q)$$

(c)

$$p \leftrightarrow \neg p$$