

# RYS\_DSGT\_Lect2\_revised

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“Some propositions  $P$  contain only T in the last column of their truth tables or, in other words, they ”

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“Tautologies and Contradictions • Some propositions  $P$  contain only T in the last column of their truth tables or, in other words, they are true for any truth values of their variables. Such propositions are called tautologies. A tautology is a statement that is always true. Examples: •  $R \vee (R \wedge (P \vee Q))$  •  $(P \vee Q) \wedge (P \vee Q)$  • If ”

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“If  $S \vee T$  is a tautology, we write  $S \vee T$ . • If  $S \vee T$  is a tautology, we write  $S \vee T$  ”

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“Tautologies and Contradictions • Some propositions  $P$  contain only T in the last column of their truth tables or, in other words, they are true for any truth values of their variables. Such propositions are called tautologies. A tautology is a statement that is always true. Examples: •  $R \vee (R \wedge (P \vee Q))$  •  $(P \vee Q) \wedge (P \vee Q)$  • If ”

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“we write  $S \vee T$ . • If  $S \vee T$  is a tautology, we write  $S \vee T$  ”

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“But isn't that equivalent symbol ”

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“Without Truth Table Using Substitution ( by formulas) ”

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“ ”

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“ ”

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