Name: VEN THON
ID: e20191250

1. Important of theory information:
   . To learn basic, mathematical concepts, e.g. sets, functions, and counting.
   . To be familiar with formal mathematical reasoning, e.g. logic, proofs.
   . To improve problem solving skills, e.g. induction, recursion.
   . To see the connections between discrete mathematical and computer science.
2. Proposition and true value of proposition:
   . proposition is a statement that is either true or false but not both (some sentences are not statements)
   . the true value of proposition is**,** if a proposition is true, then we say it has a truth value of **"true"**; if a proposition is false, its truth value is "false".
3. If we have this expression “5 < 7 and 8 modulo 3 = 1:
   . Yes, It is a statement
   . Yes, it is a proposition
   . The true value of this proposition is 0.
4. Draw the true table if we have 3 symbols (parameter):

A	B	C
T	T	T
T	T	F
T	F	T
T	F	F
F	T	T
F	T	T
F	F	F
F	F	F

5. Result of a implication b(1)" ,then"(1) and c" is:

A	B	C	A→ B	$(A \rightarrow B) \cap C$
T	T	T	T	T
T	T	F	T	F
T	F	T	F	F
T	F	F	F	F
F	T	T	T	T
F	T	F	T	F
F	F	T	T	T
F	F	F	T	F

6. The result of "a biconditional b(1)"then "(1)xor c" is:

A	B	C	A↔ B	$(A \leftrightarrow B) \oplus C$
T	T	T	T	F
T	T	F	T	T
T	F	T	F	T
T	F	F	F	F
F	T	T	F	T
F	T	F	F	F
F	F	T	T	F
F	F	F	T	T

7. Tautology is formula or assertion that is true in every possible interpretation.

Prof that: “R V (notR)” is tautology:

R	$\neg R$	$R \vee (\neg R)$
T	T	T
T	F	T
F	T	T
F	T	T

A tautology is a proposition that is always true.