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# Discrete Mathematics

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Prof. S. Parthasarathy  
drpartha@gmail.com

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## INSTRUCTIONS :

- Write legibly and clearly. Do not jump steps.
  - Be brief, and to the point. Avoid unnecessary and irrelevant statements.
1. Is the statement “*Every rule has an exception*” a paradox ? Justify your response.
  2. Express the statement “*God helps those who help themselves*” as a symbolic proposition.
  3. Prove that the contrapositive of a logical implication is equivalent to the implication itself. Do NOT use a truth table.
  4.  $P \wedge \{\neg Q \longrightarrow \neg P\} \longrightarrow Q$ , where P and Q are logical propositions. Do NOT use a truth table.

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