

Decidable:-

A_{DFA} , A_{NFA} , A_{REG} , E_{DFA} , EQ_{DFA} .

A_{CFG} , E_{CFG} .

Unrecognizable:-

$\overline{A_{TM}}$, EQ_{TM} , $\overline{EQ_{TM}}$

Recognizable:-

A_{TM} .

Undecidable:-

$HALT_{TM}$, ETM , ALL_{CFG} , $A_{TM}(ob)$, EQ_{CFG} .