



# TONTADARYA COLLEGE OF ENGINEERING

(Department of Computer Science)

## Internal Assessment -3 (18CS61)

Subject : SS & CD

Date : 14-07-2022

Semester : 6

Time : 9.15 to 10.45

Answer following questions choosing one question from each part

Total Marks: 50

### PART-A

CO

- Q1 a) What is the role of parser? Explain the different error recovery strategies. 13M (CO2)  
12M (CO2)
- b) Define with an example.
- Left most derivation.
  - Right most derivation.
  - Parse trees.

OR

- Q2 a) What is left factoring? Rewrite the following grammar after left factored. 13M (CO2)
- i)  $S \rightarrow iEtS \mid iEtSeS \mid a$  ii)  $A \rightarrow aAB \mid aA \mid a$   
 $E \rightarrow b$   $B \rightarrow bB \mid b$
- b) What is shift reduce parsing? Explain the conflicts that may occur during shift reduce parsing with example. 12M (CO2)

### PART-B

CO

- Q3 a) What is Bottom up Parsing? Explain Reductions, Handle and Handle Pruning with example. 13M (CO2)
- b) What is Recursion? Eliminate left recursion from the following grammar: 12 M (CO2)
- $S \rightarrow Aa \mid b$   
 $A \rightarrow Ac \mid Sd \mid f$

OR

- Q4 Construct the LL(1) parsing table for the following productions: 25 M (CO2)
- $E \rightarrow E+T \mid T$   
 $T \rightarrow T * F \mid F$   
 $F \rightarrow (E) \mid id$

Course Outcome	Complete Title
CO2	Design and develop lexical analyzers, parsers and code generators