School of Technology, Pandit Deendayal Energy University, Gandhinagar
Department of Computer Science and Engineering

Name of the Course:	System Software & Compiler Design
Course Code:	20CP302T

Assignment 3 (Unit-2, CO2- 10 marks)

Instructions:

1. Write each question followed by answer.
2. Hand-written submission is mandatory.
3. Use file pages to write the answers.
4. Date of submission: 25th Sept., 2023

1) Prepare operator precedence table for grammar,
bexpr → bexpr or bterm | bterm
bterm → bterm and bfactor | bfactor
bfactor → not bfactor | (bexpr) | true | false

Also parse the string - not (true or false and true).

2) Prepare operator precedence table for grammar,
S → xAy | xBy | xAz
A → aS | q
B → q

3) Construct CLR parsing table for following grammar.
S → aSbS| bSaS| ϵ
Parse the string: abba

4) Check whether given grammar is CLR(1) or not. Also check for LALR(1) for the same:
S → aPbSQ | a
Q → t | ϵ
P → r

5) Explain error recovery of LL, operator precedence and LR parsing with examples.

6) Write SDT rules

a. to convert binary numbers to decimals and calculate the value of the number 11011.
b. to convert binary float numbers to decimals and calculate the value of the number 11011.0101.
c. for generating three address code.

Draw parse tree in each by taking suitable example.