Course Name: (1) **: Selective Course (2) (Compilers)**

Program: Computer and Control Eng. (CCE **423**) Program **Academic Year:** 2022-2023

Level: Fourth Year **Semester:** Frist term

Sheet No. (4) Subject: Compiler Design

Q1: Consider the following grammar and eliminate left recursion-

$A \rightarrow ABd / Aa / a$

$B \rightarrow Be / b$

Q2: Consider the following grammar and eliminate left recursion-

$S \rightarrow (L) / a$

$L \rightarrow L , S / S$

Q3: Consider the following grammar and eliminate left recursion-

$S \rightarrow A$

$A \rightarrow Ad / Ae / aB / ac$

$B \rightarrow bBc / f$

Q4:calculate steps to draw parse tree by LL(1) as atop down parser for following grammar

$A \rightarrow ACB/ CbB / Ba$

$A \rightarrow da / BC$

$B \rightarrow g/ \varepsilon$

$C \rightarrow h / \varepsilon$

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Q5: calculate steps to draw parse tree by LL(1) as atop down parser for following grammar

$S \rightarrow ACBDE$

$A \rightarrow a / \varepsilon$

$B \rightarrow b / \varepsilon$

$C \rightarrow c$

$D \rightarrow d / \varepsilon$

$E \rightarrow e / \varepsilon$

Best Regards,
Dr. sahar kamal