Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam – 603 110

(An Autonomous Institution, Affiliated to Anna University, Chennai)

Department of Computer Science and Engineering

SET I

Continuous Assessment Test - 4

Question Paper

Degree & Branch		BE (CSE)		**Semester**	VI
Subject Code & Name		UCS1602 Compiler Design		**Regulation: 2018**	
Sections		**A, B&C**	**Academic Year**	**2020-2021**	
Date:	**30.04.2021**	**Session: FN**	**Time: 8.15 am – 10.15 am**	**Max. marks : 50**	

Optimized three address code generation

K Level	Question	CO
K3	Assume the operators are having the following Precedence and Associativity **Operators** +, -, * and / Precedence → * and / have lesser priority than + and – Associativity → * and / → right , + and - → left Develop a front end of a compiler by generating the Intermediate code in the form of Three Address Code sequence for the sample input program written using **assignment statements**. Further, optimize the generated intermediate code using **strength reduction**. Also develop a back end of the compiler for an assignment statement. Following is the sample input **INPUT** x=a+b*c y=x+k z=x+y **(1)** Write the LEX specification to identify the tokens. (5) **(2)** Write the YACC specification to check the syntax of the input source code is correct or not (10) **(3)** Write the SDT in YACC to generate three address code (10)	CO1 CO2 CO3

	(4) Implement the code optimization segment in YACC (10) **(5)** Implement the code generation in YACC (5) **(6)** Integrate all the phases and generate optimized three address code for the given source code. (10)	CO5 CO4

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Course Coordinator	PAC Team	HOD