DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular End Semester Examination – Summer 2022

	Course: B. Tech.	Branch: Computer Engineering	Semester: VI	
	Subject Code & Name: BTCOC601 - Compiler Design			
•	Max Marks: 60	Iax Marks: 60 Date: 11/08/2022 Duration: 3.4		
	 Instructions to the Students: All the questions are compulsory. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question. Use of non-programmable scientific calculators is allowed. Assume suitable data wherever necessary and mention it clearly. (Level/CO) 			
Q. 1	Solve Any Two of the fo	ollowing.		
A)	Define Compiler? State some commonly used compiler-construction tools. Re			g 6
B)	Explain how the assignment statement "position = initial + rate * 60" is grouped into the lexemes and mapped into the tokens passed on the syntax Applying analyzer.			g, 6
(C)	What are the contents of a symbol table? Explain in detail the symbol table organization for Block-Structured languages.			5, 6
	Solve Any Two of the following.			
A)	Explain the concept of the transition diagram with an example transition Remembering, diagram of <i>relop</i> . Write important conventions about the transition Applying diagram.			5, 6
B)	In lexical analysis, explain for example how tokens, patterns, and lexemes are related.			5, 6
	Explain the structure of the lexical-analyzer generator. Show the construction of an NFA from a Lex program. Solve Any Two of the following.			3, 6
A)	How Left Recursion is eliminated? Explain with algorithm and example. Remembering,			5,
B)	What is meant by shift-reduce parsing? Explain the configuration of a shift-reduce parser on input id1*id2. Construct a Predictive parsing table for the Grammar E ->E+T T, T->T*F F, F->(E) id.		Analyze n of a Remembering Applying	5,
C)			Applying	
Q.4	Solve Any Two of the fo	llowing.		
A)		enthesized and Inherited attributes with such that is meant by annotated parse tree.	uitable Analyze	6
B)		stax trees for simple expressions involving State the use of Leaf and Node in this synta		ξ, 6
C)	Explain in brief about Ty	pe checking and Type Conversion.	Remembering Analyze	6
Q. 5	Solve Any Two of the following.			
	tion of basic blocks with	—	Understand	,
	State the four principal us		Applying	
	What is a Flow Graph? into a Flow graph?	Explain how a given program can be con	verted Understanding Analyze	6