Hall Ticket Number :										

R-17

Code: 7G152

III B.Tech. I Semester Supplementary Examinations Nov/Dec 2023

Compiler Design

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)

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			Marks	CO	BL
		UNIT–I			
1.	a)	What is the difference between a pass and phase of a compiler?	4M	CO1	L3
	b)	What is an interpreter? Write Advantages and Disadvantages of Interpreter	4M	CO1	L1
	c)	Explain the different phases of the Compiler	6M	CO1	L1
		OR			
2.	a)	Define Left recursion? How to remove Left recursion from the given grammar $S \rightarrow Aa / b$ $A \rightarrow Ac / Sd / e$	7M	CO2	L3
	b)	Write a LEX program for identifying the key words and identifiers from the file?	7M	CO1	L5
		UNIT–II			
3.	a)	Draw and explain model of LR parser.	4M	CO3	L2
	b)	Consider the grammar E →E + T | E - T | T, T →T * F |T / F | F, F → (E) | id Show the sequence of moves made by shift reduce parser for the input string id1+id2*id3 is accepted or not.	10M	CO3	L4
		OR			
4.	a)	Write a short notes on YACC?	8M	CO3	L5
	b)	Differentiate between LR(1), Canonical-LR and LALR parsing methods	6M	CO3	L5
		UNIT–III			
5.	a)	Distinguish static and dynamic type checking?	7M	CO3	L5
	b)	Discuss in detail about the Syntax Directed Definitions?	7M	CO3	L2
		OR			
6.	a)	Write a short note on L-attributed definitions?	7M	CO3	L5
	b)	Explain how an L-attribute grammar can be converted into a translation scheme	7M	CO3	L2
		UNIT–IV			
7.	a)	Discuss about the stack allocation strategy with an example?	9M	C04	L2
	b)	What are various attributes of symbol table?	5M	C04	L1
		OR			
8.	a)	List out various forms of Intermediated code?	6M	C04	L1
	b)	Compare three different Storage allocation strategies?	8M	C04	L5
		UNIT–V			
9.	a)	What are the applications of DAG? Explain how the given expression can be converted into a DAG. (a+b)*(a+b)+(c+d)	8M	CO5	L2
	b)	Distinguish local and global optimization?	6M	CO5	L5
		OR			
10.	a)	Illustrate Copy propagation and Dead code elimination?	7M	CO5	L4
	b)	Describe Natural loops and Inner loops of a flow graph with an example?	7M	CO5	L1

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