GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VII(NEW) • EXAMINATION – WINTER 2016 Subject Code:2170701 Date:18/11/2 Subject Name:Complier Design Total Marl Time:10.30 AM to 1.00 PM Total Marl Instructions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.				
Q.1	(a)	 Define the following terms: 1. Token 2. Pattern 3. Lexeme 4. Ambiguous grammar 5. Handle pruning 6. Compiler 7. DAG 	07	
	(b)	Discuss various error recovery strategies of compiler.	07	
Q.2	(a) (b)	Write a short note on input buffering methods. Explain subset construction method for constructing DFA from an NFA with an example.	07 07	
	(b)	Construct DFA for the following regular expression using syntax tree with firspos, laspos and followpos function. ($a \mid b$) * a	07	
Q.3	(a)	Explain SLR parsing method with example.	07	
	(b)	Construct LL(1) Parsing table for the following grammar. Also show moves made by input string : abba. $S \rightarrow aBa$ $B \rightarrow bB \mid \epsilon$	07	
Q.3	(a)	Check that following grammar is LALR or not. $S \rightarrow L=R$ $S \rightarrow R$ $L \rightarrow *R$ $L \rightarrow id$ $R \rightarrow L$	07	
	(b)	Write a short note on operator precedence parsing with an example.	07	
Q.4	(a)	Write S-attributed syntax directed definition for simple desk calculator. Draw	07	
_	(b)	annotated parse tree for any valid input. What is Intermediate Code? What is its importance? Discuss various representations of three address code.	07	
Q.4	(a) (b)	OK Discuss synthesized attributes and inherited attributes in details. Explain Peephole Optimization method.	07 07	
Q.5	(a)	Discuss generic issues in the design of code generator.	07	

1

	(b)	Explain the following parameter passing methods.	07
		1. Call-by-value	
		2. Call-by-reference	
		3. Copy-Restore	
		4. Call-by-Name	
		OR	
Q.5	(a)	Explain Dynamic storage allocation technique.	07
-	(b)	Discuss any three methods for code optimization.	07
