	Enrollment No: _		Exam Seat No:			
			C.U.SHAH	UNIVERSITY		
	Summer Examination-2019 Subject Name: Translator Design					
	Subjec	et Code: 4	TE07TDE1	Branch: B.Tech (CE)	M. J. 70	
	Semest	ter: 7	Date: 18/03/2019	Time: 10:30 To 01:30	Marks: 70	
	Instructions:					
	(1) Use of Programmable calculator & any other electronic instrument is prohibited.					
	(2) Instructions written on main answer book are strictly to be obeyed.(3) Draw neat diagrams and figures (if necessary) at right places.					
	(4) Assume suitable data if needed.					
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Q-1		Attempt the following questions:				
	a)	Define cor				
	b)	What is an Define har	nnotated parse tree?			
	c) d)		etivation record?			
	u) e)		nition of cross compiler.			
	f) Differentiate between inherited attribute and synthesized attribute.					
	g)		ou mean by two pass assemb			
	h)	•	EX and YACC?	ory.		
	i)		AG? Draw a DAG for a+(b-	c)*d+(b-c)*d		
	j)		erator grammar.			
	k)		•	of 0's and 1's where all string sh	ould consist of	
		even numb	per of 0's and odd number of	f 1's.		
	1)		nbiguous grammar?			
	,		eephole optimization?			
			is storage allocation strategic	es.		
Atte	empt any	y four ques	stions from Q-2 to Q-8			
Q-2		Attempt a	all questions			(14)
	(a)		nases of compiler in detail.			
	(b)			ion and construct DFA from it for	following	
		expression	$: a^+(b \mid c) \ a^*c\#$			
Q-3	.	Attemnt a	all auestions			(14)
Q-3	(a)	Attempt all questions Construct DFA for following regular expression without constructing NFA and mi				(17)
	(u)	a*b*a(a b)		r		
	(b)	Find LR(1) items for following gramm	nar and construct CLR parsing tal	ole.	
			a A c B c b B a			
		$A \rightarrow d$				
		$B \rightarrow d$				
Q-4	ļ	Attempt	all questions			(14)
	(a)			s techniques to implement symbo	l table.	\ - /



Q-5 **Attempt all questions (14)** Construct a predictive parser for the grammar (a) $E \rightarrow E+T \mid T$ $T \rightarrow T*F \mid F$ $F \to F' | (E) | 0 | 1$ Construct a syntax directed translation schema that translates arithmetic expressions from infix into postfix notation. Show the application of your scheme to string "3*4+5*2" **Q-6** Attempt all questions **(14)** Find LR(0) items for following grammar and construct SLR parsing table. (a) $S \rightarrow A a A b$ $S \rightarrow B b B a$ $A \rightarrow \in$ $B \rightarrow \epsilon$ **(b)** For following grammar find operator precedence function values. $E \rightarrow E + E \mid E^*E \mid E^*E \mid (E) \mid id$ Q-7 Attempt all questions (14)List the major steps of relocation and linking algorithms. Explain in brief. (a) **(b)** Explain principle sources of code optimization in detail. **Attempt all questions** Q-8 **(14)** What is nested macro? Explain with suitable example. (a) **(b)** Explain various parameter passing methods in detail.

Write three address codes for following expression and generate final code by clearly showing register descriptors and address descriptors. x = a * (b - c) - d / (e + -f).

