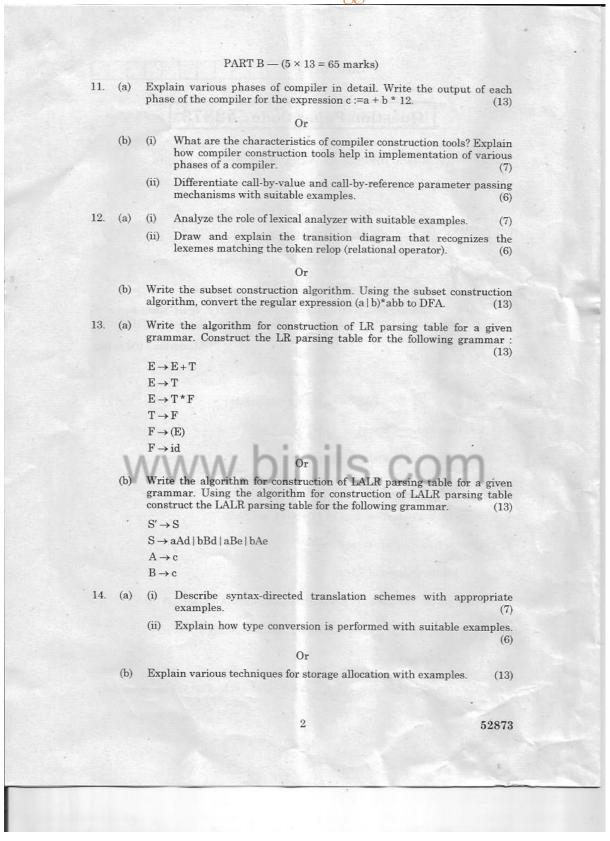
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	Reg. No. :	
	Question Paper Code: 52873	
	B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.	
	Sixth Semester	
	Computer Science and Engineering	
	CS 6660 — COMPILER DESIGN	
	(Common to Information Technology)	
	(Regulation 2013)	
	(Also common to PTCS 6660 – Complier Design for B.E. (Part-Time) for Fifth Semester – Computer Science and Engineering – Regulation 2014)	
	Time : Three hours Maximum : 100 marks	8
	Answer ALL questions.	
	PART A — $(10 \times 2 = 20 \text{ marks})$	
	List the attributes stored in symbol table.	
	2. Why is compiler optimization essential?	
	3. Discriminate tokens, patterns and lexemes.	
	4. Write the regular expression for all valid identifiers.	
	5. What is meant by handle pruning?	
	6. Mention the purpose of YACC.	
	7. What are the various ways of passing a parameter to a function?	
	8. Write the grammar for flow control statement while-do.	
	9. Define address descriptor.	
	10. Write the object code sequence for t:=a+b produced by a typical code generator	. 3
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15. (a) (i) Write and explain the algorithm for construction of basic blocks. (7)	230
(ii) Construct the DAG for the following basic block. (6)	
x = a[i]	
a[j]= y	
z = a[i]	
Or	
(b) Explain the algorithm that generates code for a single basic block with suitable examples. (13)	
PART C — (1 × 15 = 15 marks)	
16. (a) In SQL, keywords and identifiers are case-insensitive. Write a Lex program that recognizes the keywords SELECT, FROM, and WHERE (in any combination of capital and lower-case letters), and token ID, which may be any sequence of letters and digits, beginning with a letter. (15)	
Or	
(b) A simple matrix-multiplication program is given below:	
for (i=0; i <n; i++)<="" td=""><td></td></n;>	
for (j=0; j <n; j++)<="" td=""><td></td></n;>	
c[i][j] = 0.0;	
for (i=0; i <n; i++)<="" td=""><td></td></n;>	
for (j=0; j <n; j++)<="" td=""><td></td></n;>	
for (k=0; k <n; (7)<="" (i)="" +="" 8="" a[i][k]*b[k][j];="" and="" are="" assume="" bytes,="" c[i][j]="c[i][j]" entries="" in="" into="" k++)="" matrices="" matrix="" numbers="" order.="" program="" require="" row-major="" statements.="" stored="" td="" that="" the="" three-address="" translate=""><td></td></n;>	
(ii) Construct the flow graph for the code from 1. (6)	
(iii) Identify the loops in the flow graph from 2. (2)	
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