JAMAS A UNIT TO A DE CONTRACTOR SOLL STOLL

- 1). Explain the translation to produce three address code for boolean expressions:
- a) obtain a Quadruple, Triple, Syntax tree and vidirect triple for the following expression.

 (a-b) * (c-d) (a+b)
- 3) explain :
 - i) Syntactic emors
 - ii) Semantic errors.
- A) Describe the different data structures used for maintaining symbol table.
- 5) Explain error recovery strategies
- 6) Explain backpatching.
- t) what is an Intermediate code? why is it necessary in the design of the compiler?
- 8) Explain with the help of an example the most closely nested rule for accessing non local names.
- 9) Translate the following code statements into:
 - 1) quadruples
 - ii) Triples as variables
 - (ii) Indirect triple . cohile (axc and bxd)

¿ c= c+1°,

d = d+1.

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- phases of compiler and how can they be resolved.
- 11) write the translation scheme for flow of control statements.
- 12) what is a symbol table? Explain the contents of symbol table and data structures used to create symbol table.
- 13) Explain with the help of a diagram, the smechance of activation record.

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	14) Explain Static Scope and dynamic scope.
	15) Write the translation scheme for Assignment
	statements:
	16) Provide an aborithm to partition 3-address
	and in him Hack, Todicate the basic blocks
	and draw flow graph for the following source code!
-	i=o,
	Val = 0; (d+3) - (b-3) *
	while (i++<10)
and the designation and	2 roma sidastaje
	i= 2*i, (um schanne)
	amplaine of loval+=i, its star tampfile of solid
	boot table.
	eptour emor herorety short-cries
1	4) Addanibra Define the following:
×	a) Amotated pause tree .
	b) Dependency graph.
9	aplain with the help of an example the oust closely o
1	8). Differentiate between static and theap allocation
	Strategies to transmit about morally and statement
	colquishoup (1
19	1) what do you mean by Backpatching and how
	it is been caused out?
	white (acc and bota)
	-117-23
	d= a11;
	onle a short rote on the eners that can occur at
	water of semples and here can they be resched.
T	only the translation denema, for flow at control state
	when is a symbol table? Explain the contents of Eyor
	While indiana Storm of hours
	and a dead about med to except against the shuture of

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UNIT -4

- 1) Explain the following!
 - i) Register descriptor
 - ii) Addren descriptor.
- a) Describe the different issues in the design of code
- 3) With the help of an example, explain the code generation algorithm.
- 4) Construct DAG for the following;
 - (a*b) + (c-d) * (a*b) +b.
- 5) Consider

int a [10]

for (i=0, i <= 10, i++)

Sum = sum + a[i] ;

Construct basic blocks and flow graphs.

- 6) Explain the following techniques of code optimization with examples.
 - i) Induction variable.
 - ii) Dead code elimination.
- 4) write a note on next use information.
- 8) Explain the rules used for the construction of the basic blocks
- a) Explain the significance of the construction of the DAG worst the following example.

B[i] = c[i] * D[i] | E

10) Consider the following Statements given below.

x = a - b y = a - d

z= 2*y.

- i) write the anembly code for the above statement
- 11) write the contents of address and register descriptor for the above statement.

iii) calculate the total cost of e	xecuting the above statement.
11) Explain the loop unrolling techn	rique with an example.
12) Explain the characteristic of	beephole ophimization.
13) obtain the anembly code a	inevated after ampi
the following statements . show	the content of address
and register dweniptor.	Describe Albertagent was
T1=a+b	colourose
reduce te = ti+c. ange sign	man as to allow any Alill
14) Construct DAG for the foll	awin code.
ti=a+b mount	A sat of shall building
x= t1 . d+	(215) + (D-1) + (140)
ta = a-b	(basides
y=t2	101 a 1107
z= xty.	0 = mt
	(++) -01=21 -0=1) rd
15). Obtain assembly language of	ode generated after
compiling the following stateme	nts show the contents
of address descriptor and regis	ter descriptor.
t= a-b	examples.
v= t+u ·	D Tedertice variable
	til Dead facte elimination
16). Write a short note on Pee	phole optimization.
17) Explain the following code o	plimization techniques:
a) Copy Propagation	Explain the significance
b) Common subexprenion elimin	ation Manual Assess
c) Dead code elimination:	Find + Find = Find
	Consider the following stone
18) Describe the local transforma	
to pasic proces.	b-pe p
to basic blocks. 19) Compute the cost of the following the cost of the following the cost of the following the fo	lowing.
19) Compute the cost of the follows * RI, * RO	

for the above distancet.

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20).	Consider the following statements:
	for (int i=0; i≤10; i+t)
	{ a = a + b[i], y
	i) construct the basic block for the code.
	ii) ophimise the code usury different ophimisation techniques
21)	Construct DAG for the following code.
	x= a+b
	y = a - b
	w= a+c
	z=2*y.
	what are the applications of DAG?
22)	write the 3-address code for the fragment given below.
	convert it to basic blocks and draw flow graph.
	Rirther oplimize the code,
	count = 0,
	result = 0.
	while (count + + < 20)
	t
	inc = 2 * count;
	reput + = inc,
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