

Question Bank

Sub: Compiler Design

Module-IV

Sem:6th

Branch:CSE

Objective Questions

- Global and local variables are stored in _____.
a) data segment b) symbol table c) extra segment d) main memory
- The _____ attribute holds the value of the expression.
a) place b) code c) symbol d) mode
- The _____ attribute holds the sequence of three address statements.
a) place b) code c) symbol d) mode
- The _____ attribute indicates the type of the result.
a) place b) code c) symbol d) mode
- The names (in the source program) are mapped to storage in the machine in _____.
a) symbol tables b) runtime support system c) stack d) extra segment
- Each execution of the procedure is called _____.
a) activation b) execution c) symbol d) stack
- _____ is used to keep track of currently-active activations.
a) control stack b) activation c) execution d) symbol
- The _____ is a function mapping from names to storage locations.
a) environment b) state c) stack d) activation
- The _____ is a function mapping storage locations to the values held in those locations.
a) environment b) state c) stack d) activation
- _____ contains all information required for a single activation of a procedure.
a) stack b) activation record c) tree d) environment

Short Questions

- What is the difference between activation of the procedure and activation record?
- Define syntax-directed translation.
- Define attribute. Give the types of an attribute.
- What do you mean by annotated parse tree?
- Define symbol table.
- What is the need for a run time support system?
- What is syntax directed definition?
- List advantages and disadvantages of attributed translation.
- What changes should be made in semantic analyzer to add typecasting?
- What is the significance of symbol table at compile time and run time?

Long Questions

1. Discuss the symbol table organization, also give the difference between binary tree and hashing organization of symbol table.
2. Write a SDD for 'case' statements in "C" language. Use the scheme to generate TAC for the following:

```
Switch A+B
Begin
    Case 2 : X := Y
    Caes 5 :
        Switch X
        Begin
            Case 0 : A := B + 1
            Case 1 : A:= B + 3
            Default : A :=2
        End
    Case 9 : X := Y - 1
    Default : X := Y + 1
End
```

3. Write syntax directed translation scheme for flow control statements. Explain with examples.
 4. Compare and contrast different storage allocation schemes.
 5. Write SDD for "Do-while" statement and explain.
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