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**Started on** Friday, 25 February 2022, 7:01 PM

**State** Finished

**Completed on** Friday, 25 February 2022, 7:28 PM

**Time taken** 26 mins 15 secs

**Marks** 28.00/30.00

**Grade** 9.33 out of 10.00 (93%)

**Question 1**

Correct

Mark 2.00 out of 2.00

Symbol table is created by .....

- ☐ a. None of the mentioned
- ☐ b. Assembler
- ☒ c. Compiler
- ☐ d. Interpreter



Your answer is correct.

The correct answer is:

Compiler

## Question 2

Correct

Mark 2.00 out of 2.00

1. Match all items in Group 1 with correct options from those given in Group 2.

Group 1	Group 2
P. Regular expression	1. Syntax analysis
Q. Pushdown automata	2. <u>Code generation</u>
R. Dataflow analysis	3. Lexical analysis
S. Register allocation	4. <u>Code optimization</u>

- ☒ a. P-3, Q-1, R-4, S-2
- ☐ b. P-2, Q-1, R-4, S-3
- ☐ c. P-3, Q-4, R-1, S-2
- ☐ d. P-4, Q-1, R-2, S-3



Your answer is correct.

The correct answer is:

P-3, Q-1, R-4, S-2

## Question 3

Correct

Mark 2.00 out of 2.00

Consider the syntax directed definition shown below.

$$S \rightarrow id : = E \quad \{ \text{gen} (id.place = E.place); \}$$

$$E \rightarrow E_1 + E_2 \quad \{ t = \text{newtemp} ( ); \text{gen} (t = E_1.place + E_2.place); \quad E.place = t \}$$

$$E \rightarrow id \quad \{ E.place = id.place; \}$$

For the statement 'X: = Y + Z', the 3-address code sequence generated by this definition is

- ☐ a. X = Y + Z
- ☐ b. t1 =Y; t2 = t1 + Z; X = t2
- ☒ c. t1 = Y + Z; X = t1
- ☐ d. t1 = Y; t2 = Z; t3 = t1 + t2; X = t3



Your answer is correct.

The correct answer is:

t1 = Y + Z; X = t1

## Question 4

Correct

Mark 2.00 out of 2.00

Consider the following Syntax Directed Translation Scheme, what is output printed by a bottom up parser for the input **aab**

$$\begin{array}{lll} S & \longrightarrow & \mathbf{aA} \quad \{ \text{print 1} \} \\ S & \longrightarrow & \mathbf{a} \quad \{ \text{print 2} \} \\ A & \longrightarrow & \mathbf{Sb} \quad \{ \text{print 3} \} \end{array}$$

- ☐ a. 2 2 1
- ☐ b. Syntax error
- ☒ c. 2 3 1
- ☐ d. 1 3 2



Your answer is correct.

The correct answer is:

2 3 1

**Question 5**

Correct

Mark 2.00 out of 2.00

Type checking is normally done during

- ☐ a. Code optimization
- ☐ b. Lexical analysis
- ☒ c. Syntax directed translation
- ☐ d. Syntax analysis



Your answer is correct.

The correct answer is:

Syntax directed translation

**Question 6**

Correct

Mark 2.00 out of 2.00

The abstract form of a parse tree is called -----

- ☐ a. Binary Tree
- ☐ b. Decision tree
- ☐ c. Derivation Tree
- ☒ d. Syntax Tree



Your answer is correct.

The correct answer is:

Syntax Tree

**Question 7**

Correct

Mark 2.00 out of 2.00

A parse tree showing the value of attributes at each node is called-----

- ☐ a. Semantic tree
- ☐ b. None of the above
- ☐ c. Syntax tree
- ☒ d. Annotated parse tree



Your answer is correct.

The correct answer is:  
Annotated parse tree

**Question 8**

Correct

Mark 2.00 out of 2.00

Syntax directed translation scheme is desirable because-----

- ☒ a. It is easy to modify
- ☐ b. All of the above
- ☐ c. It is based on the syntax
- ☐ d. Its description is independent of any implementation



Your answer is correct.

The correct answer is: It is easy to modify

**Question 9**

Correct

Mark 2.00 out of 2.00

In synthesized attribute, evaluation is done in-----order

- ☐ a. None of the above
- ☒ b. Bottom-up
- ☐ c. Top-down
- ☐ d. Pre-order



Your answer is correct.

The correct answer is:  
Bottom-up

**Question 10**

Correct

Mark 2.00 out of 2.00

An SDD that involves only synthesized attributes is called-----

- ☐ a. Both A and B
- ☐ b. L-attributed
- ☒ c. S-attributed
- ☐ d. None of the above



Your answer is correct.

The correct answer is:  
S-attributed

**Question 11**

Correct

Mark 2.00 out of 2.00

Semantic actions may involve -----

- ☐ a. Generation of intermediate code
- ☐ b. Printing of an error diagnostic
- ☐ c. Computation of values
- ☒ d. All of the above



Your answer is correct.

The correct answer is:

All of the above

**Question 12**

Correct

Mark 2.00 out of 2.00

Symbol tables can be implemented using .....

- ☐ a. Linear List
- ☐ b. Hash table
- ☒ c. Both a and b
- ☐ d. None of the above



Your answer is correct.

The correct answer is:

Both a and b

**Question 13**

Correct

Mark 2.00 out of 2.00

The postfix form of the expression  $(a+b)*(c-d)/f$  is .....

- ☐ a.  $cd-ab\_f/$
- ☒ b.  $ab+cd\_f/$
- ☐ c.  $abcd+-f/$
- ☐ d.  $abcdf+-\_f/$



Your answer is correct.

The correct answer is:

$ab+cd\_f/$

**Question 14**

Correct

Mark 2.00 out of 2.00

Three address codes are implemented using

- ☐ a. Quadruples
- ☐ b. Indirect triples
- ☐ c. Triples
- ☒ d. All the above



Your answer is correct.

The correct answer is:

All the above

**Question 15**

Incorrect

Mark 0.00 out of 2.00

Identify the correct 3 address code representation for the expression **if e then x else y**

- ☒ a.  $e?x;y$
- ☐ b.  $ex?y$
- ☐ c.  $e?xy$
- ☐ d.  $exy?$



Your answer is incorrect.

The correct answer is:

$exy?$



◀ Quiz 2 (Unit 5) 12-04-2022

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