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**NORTH AMERICAN  
UNIVERSITY**  
INSPIRATION INNOVATION GLOBAL COMPETENCE



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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 6 February  
- 12 February > Homework 4

<b>Started on</b>	Monday, 6 February 2017, 3:13 PM
<b>State</b>	Finished
<b>Completed on</b>	Monday, 6 February 2017, 3:16 PM
<b>Time taken</b>	3 mins 36 secs
<b>Marks</b>	7.00/7.00
<b>Grade</b>	<b>100.00</b> out of 100.00

**Question 1**

Correct

Mark 1.00 out of 1.00

The following grammar cannot produce?

 $\langle \text{assign} \rangle \rightarrow \langle \text{id} \rangle = \langle \text{expr} \rangle$  $\langle \text{id} \rangle \rightarrow A \mid B \mid C$  $\langle \text{expr} \rangle \rightarrow \langle \text{expr} \rangle + \langle \text{term} \rangle$  $\mid \langle \text{term} \rangle$  $\langle \text{term} \rangle \rightarrow \langle \text{term} \rangle * \langle \text{factor} \rangle$  $\mid \langle \text{factor} \rangle$  $\langle \text{factor} \rangle \rightarrow ( \langle \text{expr} \rangle )$  $\mid \langle \text{id} \rangle$ 

Select one:

- ☐ a.  $A = (A+B) * C$
- ☒ b.  $A = (A+B) * 3$  ✓
- ☐ c.  $A = (B+B) * C$
- ☐ d.  $C = (A + (C + C)) * C$

Your answer is correct.

The correct answer is:  $A = (A+B) * 3$

**Question 2**

Correct

Mark 1.00 out of 1.00

What is the lowest level syntactic unit?

Select one:

- ☐ a. EBNF
- ☒ b. lexeme ✓
- ☐ c. BNF
- ☐ d. grammar

Your answer is correct.

The correct answer is: lexeme

**Question 3**

Correct

Mark 1.00 out of 1.00

The following grammar is ambiguous:

$$\langle S \rangle \rightarrow \langle A \rangle$$
$$\langle A \rangle \rightarrow \langle A \rangle + \langle A \rangle \mid \langle id \rangle$$
$$\langle id \rangle \rightarrow a \mid b \mid c$$

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

**Question 4**

Correct

Mark 1.00 out of 1.00

A metalanguage is a language that is used to describe another language. BNF is a metalanguage for programming languages.

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

**Question 5**

Correct

Mark 1.00 out of 1.00

In the following grammar we can say that:

$$\langle \text{assign} \rangle \rightarrow \langle \text{id} \rangle = \langle \text{expr} \rangle$$
$$\langle \text{id} \rangle \rightarrow A \mid B \mid C$$
$$\langle \text{expr} \rangle \rightarrow \langle \text{expr} \rangle + \langle \text{term} \rangle$$
$$\mid \langle \text{term} \rangle$$
$$\langle \text{term} \rangle \rightarrow \langle \text{term} \rangle * \langle \text{factor} \rangle$$
$$\mid \langle \text{factor} \rangle$$
$$\langle \text{factor} \rangle \rightarrow ( \langle \text{expr} \rangle )$$
$$\mid \langle \text{id} \rangle$$

Select one:

- ☒ a. \* has precedence over + ✓
- ☐ b. we cannot say anything about their precedence
- ☐ c. + has precedence over \*
- ☐ d. + and \* have same precedence

Your answer is correct.

The correct answer is: \* has precedence over +

**Question 6**

Correct

Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for scientific calculations?

Select one:

- ☐ a. Algol
- ☒ b. Fortran ✓
- ☐ c. AWK
- ☐ d. Scitran
- ☐ e. Cobol

Your answer is correct.

The correct answer is: Fortran

**Question 7**

Correct

Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for AI?

Select one:

- ☐ a. AWK
- ☐ b. Fortran
- ☐ c. Pascal
- ☐ d. Algol
- ☒ e. Lisp ✓

Your answer is correct.

The correct answer is: Lisp