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**NORTH AMERICAN  
UNIVERSITY**  
INSPIRATION INNOVATION GLOBAL COMPETENCE



**Islam Kamilov** ▾



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

<b>Started on</b>	Monday, 6 February 2017, 3:00 PM
<b>State</b>	Finished
<b>Completed on</b>	Monday, 6 February 2017, 3:10 PM
<b>Time taken</b>	10 mins
<b>Marks</b>	6.50/7.00
<b>Grade</b>	<b>92.86</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.  $A = (A+B) * 3$  ✓
- ☐ b.  $C = (A + (C + C)) * C$
- ☐ c.  $A = (A+B) * C$
- ☐ d.  $A = (B+B) * C$

Your answer is correct.

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

**Question 2**

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 3**

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. + and \* have same precedence
- ☐ d. + has precedence over \*

Your answer is correct.

The correct answer is: \* has precedence over +

**Question 4**

Correct

Mark 1.00 out of 1.00

A grammar that generates a sentential form for which there are two or more distinct parse trees is said to be \_\_\_\_\_.

Select one:

- ☐ a. unambiguous
- ☒ b. ambiguous ✓
- ☐ c. flexible
- ☐ d. readable

Your answer is correct.

The correct answer is: ambiguous

**Question 5**

Correct

Mark 1.00 out of 1.00

Operator precedence can be achieved in \_\_\_\_\_ grammars.

Select one:

- ☐ a. token
- ☐ b. ambiguous
- ☐ c. BNF
- ☒ d. non-ambiguous ✓

Your answer is correct.

The correct answer is: non-ambiguous

**Question 6**

Correct

Mark 1.00 out of 1.00

Why should we study programming languages?

Select one:

- ☐ a. To be able to learn new languages more efficiently
- ☐ b. To be able to select languages more effectively
- ☐ c. To increase our capacity to use different constructs
- ☒ d. All of them ✓

Your answer is correct.

The correct answer is: All of them

**Question 7**

Partially correct

Mark 0.50 out of 1.00

Please match the steps for Hybrid Implementation process.

- Step 3  ✓
- Step 5  ✗
- Step 2  ✗
- Step 4  ✓
- Step 1  ✗
- Step 6  ✓

Your answer is partially correct.

You have correctly selected 3.

The correct answer is: Step 3 → Syntax Analyzer, Step 5 → Interpreter, Step 2 → Lexical Analyzer, Step 4 → Intermediate Code Generator, Step 1 → Source Program, Step 6 → Result