

 <http://www.na.edu>



 E-mail: moodle@na.edu



**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

Started on	Monday, 6 February 2017, 3:00 PM
State	Finished
Completed on	Monday, 6 February 2017, 3:10 PM
Time taken	10 mins
Marks	6.50/7.00
Grade	92.86 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