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E-mail: moodle@na.edu



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UNIVERSITY**
INSPIRATION INNOVATION GLOBAL COMPETENCE

**Medina Colic**

Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Thursday, 19 January 2017, 1:39 AM**State** Finished**Completed on** Thursday, 19 January 2017, 1:43 AM**Time taken** 3 mins 35 secs**Marks** 4.00/5.00**Grade** **80.00** out of 100.00**Question 1**

Correct Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

 True ✓ False

The correct answer is 'True'.

Question 2

Correct Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Lisp

Question 3

Incorrect Mark 0.00 out of 1.00

Why should we study programming languages?

Select one:

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

Your answer is incorrect.

The correct answer is: All of them

Question 4

Correct

Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Algol
- b. Cobol ✓
- c. AWK
- d. Fortran
- e. Pascal

Your answer is correct.

The correct answer is: Cobol

Question 5

Correct

Mark 1.00 out of 1.00

Please match the steps for Hybrid Implementation process.

- | | | |
|--------|-----------------------------|---|
| Step 4 | Intermediate Code Generator | ✓ |
| Step 5 | Interpreter | ✓ |
| Step 1 | Source Program | ✓ |
| Step 6 | Result | ✓ |
| Step 2 | Lexical Analyzer | ✓ |
| Step 3 | Syntax Analyzer | ✓ |

Your answer is correct.

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

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Thursday, 19 January 2017, 1:44 AM

State Finished

Completed on Thursday, 19 January 2017, 1:49 AM

Time taken 5 mins 13 secs

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. JAVA
- b. FORTRAN
- c. LISP X
- d. ALGOL
- e. Python

Your answer is incorrect.

The correct answer is: ALGOL

Question 2

Correct

Mark 1.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Cost
- b. Reliability
- c. Age ✓
- d. Writability
- e. Readability

Your answer is correct.

The correct answer is: Age

Question 3

Correct

Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Fortran

Question 4

Correct

Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Python
- b. Cobol
- c. C++
- d. C ✓
- e. Java

Your answer is correct.

The correct answer is: C

Question 5

Correct

Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Fortran
- b. AWK
- c. Pascal
- d. Algol
- e. Cobol ✓

Your answer is correct.

The correct answer is: Cobol

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Thursday, 19 January 2017, 1:51 AM

State Finished

Completed on Thursday, 19 January 2017, 1:56 AM

Time taken 5 mins 11 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

True ✓

False

The correct answer is 'True'.

Question 2

Correct

Mark 1.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Cost
- b. Writability
- c. Readability
- d. Reliability
- e. Age ✓

Your answer is correct.

The correct answer is: Age

Question 3

Correct

Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Python
- b. C++
- c. Java
- d. Cobol
- e. C ✓

Your answer is correct.

The correct answer is: C

Question 4

Correct Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Fortran

Question 5

Correct

Mark 1.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. Python
- b. FORTRAN
- c. ALGOL ✓
- d. LISP
- e. JAVA

Your answer is correct.

The correct answer is: ALGOL

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Thursday, 26 January 2017, 2:59 PM

State Finished

Completed on Thursday, 26 January 2017, 3:07 PM

Time taken 8 mins 1 sec

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Smalltalk
- b. Java
- c. Algol
- d. Fortran ✓
- e. C

The correct answer is: Fortran

Question 2

Correct Mark 1.00 out of 1.00

_____ first used in Fortran IV.

Select one:

- a. Pointers
- b. Explicit data type declarations ✓
- c. All
- d. Arrays

The correct answer is: Explicit data type declarations

Question 3

Incorrect Mark 0.00 out of 1.00

```
If ( a > b )
```

```
    print "Yes"
```

This logic had been implemented in which programming language first?
(conditional branching)

Select one:

- a. Fortran ✗
- b. Speedcoding
- c. ALGOL
- d. APL
- e. C

The correct answer is: Speedcoding

Question 4

Correct Mark 1.00 out of 1.00

What is the first Programming Language?

Select one:

- a. Algol 58
- b. Zuse's Plankalkul ✓
- c. APL
- d. Fortran I

The correct answer is: Zuse's Plankalkul

Question 5

Correct

Mark 1.00 out of 1.00

```
If ( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. APL
- b. Speedcoding
- c. Fortran ✓
- d. ALGOL
- e. C

The correct answer is: Fortran

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Thursday, 26 January 2017, 3:08 PM**State** Finished**Completed on** Thursday, 26 January 2017, 3:16 PM**Time taken** 7 mins 55 secs**Marks** 3.00/5.00**Grade** **60.00** out of 100.00**Question 1** Correct Mark 1.00 out of 1.00

Why source code usage was developed instead of using object/machine code?

Select one:

- a. Machine code has poor readability
- b. Machine code was hard to modify
- c. Machine code has no indexing
- d. All of them ✓

The correct answer is: All of them

Question 2

Incorrect

Mark 0.00 out of 1.00

Which one is not correct about Zuse's Plankalkul?

Select one:

- a. Has invariants ✗
- b. Has advanced data structures
- c. Implemented in 1972
- d. Designed in 1945

The correct answer is: Implemented in 1972

Question 3

Correct

Mark 1.00 out of 1.00

What is the first AI language?

Select one:

- a. LISP ✓
- b. FORTRAN
- c. JAVA
- d. PYTHON

The correct answer is: LISP

Question 4

Incorrect Mark 0.00 out of 1.00

```
If( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. C
- b. Fortran
- c. APL
- d. ALGOL ✗
- e. Speedcoding

The correct answer is: Fortran

Question 5

Correct Mark 1.00 out of 1.00

_____ first used in Fortran IV.

Select one:

- a. Arrays
- b. Pointers
- c. All
- d. Explicit data type declarations ✓

The correct answer is: Explicit data type declarations

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

Started on Tuesday, 7 February 2017, 11:43 AM

State Finished

Completed on Tuesday, 7 February 2017, 11:53 AM

Time taken 9 mins 49 secs

Marks 7.00/7.00

Grade **100.00** 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. $C = (A + (C + C) * C) * C$
- b. $A = (A+B) * 3$ ✓
- 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 grammar that generates a sentential form for which there are two or more distinct parse trees is said to be _____.

Select one:

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

Your answer is correct.

The correct answer is: ambiguous

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. we cannot say anything about their precedence
- b. + and * have same precedence
- c. + has precedence over *
- 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

Operator precedence can be achieved in _____ grammars.

Select one:

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

Your answer is correct.

The correct answer is: non-ambiguous

Question 5

Correct

Mark 1.00 out of 1.00

What is the lowest level syntactic unit?

Select one:

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

Your answer is correct.

The correct answer is: lexeme

Question 6

Correct

Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Cobol
- b. C++
- c. Python
- d. Java
- e. C ✓

Your answer is correct.

The correct answer is: C

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

Your answer is correct.

The correct answer is: Lisp

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February > Homework 5

Started on Monday, 13 February 2017, 1:48 PM

State Finished

Completed on Monday, 13 February 2017, 1:57 PM

Time taken 9 mins 26 secs

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

A(n) _____ is a device used to describe more of the structure of a programming language than can be described with a context-free- grammar.

Select one:

- a. static semantics
- b. recognizer 
- c. attribute grammar
- d. Extended BNF

Your answer is incorrect.

The correct answer is: attribute grammar

Question 2

Correct Mark 1.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To find inherited attributes
- b. To find intrinsic attributes
- c. To find synthesized attributes
- d. To check ambiguity 

Your answer is correct.

The correct answer is: To check ambiguity

Question 3

Correct

Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 4

Correct

Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 5

Correct

Mark 1.00 out of 1.00

The static semantics of a language deals with the syntax rather than semantics.

Select one:

- True ✓
- False

True

The correct answer is 'True'.

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February > Homework 5

Started on Wednesday, 15 February 2017, 11:46 AM**State** Finished**Completed on** Wednesday, 15 February 2017, 11:55 AM**Time taken** 8 mins 53 secs**Marks** 3.00/5.00**Grade** **60.00** out of 100.00**Question 1** Incorrect Mark 0.00 out of 1.00

Type compatibility can be checked in context-free grammars.

Select one:

 True X False

Attribute grammar can check type compatibility.

The correct answer is 'False'.

Question 2

Incorrect

Mark 0.00 out of 1.00

What does the following attribute grammar mean:

Syntax rule: `<fun_def> → function <fun_name>[1]`

`<fun_body> end <fun_name>[2];`

Predicate: `<fun_name>[1].string == <fun_name>[2].string`

Select one:

- a. Functions cannot be defined without variables
- b. Functions should have two variables
- c. Syntax rule should come before predicate rule when writing in that programming language 
- d. The name on the end of a function must match the functions name

Your answer is incorrect.

The correct answer is: The name on the end of a function must match the functions name

Question 3

Correct Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

- True ✓
 False

The correct answer is 'True'.

Question 4

Correct Mark 1.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To check ambiguity ✓
 b. To find intrinsic attributes
 c. To find inherited attributes
 d. To find synthesized attributes

Your answer is correct.

The correct answer is: To check ambiguity

Question 5

Correct

Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

Select one:

- True ✓
- False

The correct answer is 'True'.

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February > Homework 5

Started on Wednesday, 15 February 2017, 11:55 AM

State Finished

Completed on Wednesday, 15 February 2017, 11:59 AM

Time taken 3 mins 21 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00

Question 1

Correct

Mark 1.00 out of 1.00

A(n) _____ is a device used to describe more of the structure of a programming language than can be described with a context-free- grammar.

Select one:

- a. Extended BNF
- b. attribute grammar ✓
- c. static semantics
- d. recognizer

Your answer is correct.

The correct answer is: attribute grammar

Question 2

Correct

Mark 1.00 out of 1.00

What does the following attribute grammar mean:

Syntax rule: `<fun_def> → function <fun_name>[1]`

`<fun_body> end <fun_name>[2];`

Predicate: `<fun_name>[1].string == <fun_name>[2].string`

Select one:

- a. Functions should have two variables
- b. The name on the end of a function must match the functions name ✓
- c. Syntax rule should come before predicate rule when writing in that programming language
- d. Functions cannot be defined without variables

Your answer is correct.

The correct answer is: The name on the end of a function must match the functions name

Question 3

Correct

Mark 1.00 out of 1.00

The static semantics of a language deals with the syntax rather than semantics.

Select one:

- True ✓
- False

True

The correct answer is 'True'.

Question 4

Correct

Mark 1.00 out of 1.00

Type compatibility can be checked in context-free grammars.

Select one:

- True
- False ✓

Attribute grammar can check type compatibility.

The correct answer is 'False'.

Question 5

Correct

Mark 1.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To check ambiguity ✓
- b. To find inherited attributes
- c. To find intrinsic attributes
- d. To find synthesized attributes

Your answer is correct.

The correct answer is: To check ambiguity

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 20 February - 26 February > Homework 6 (Slides: Ch4 - Part 1)

Started on Wednesday, 22 February 2017, 1:09 PM**State** Finished**Completed on** Wednesday, 22 February 2017, 1:14 PM**Time taken** 4 mins 37 secs**Marks** 4.00/4.00**Grade** 100.00 out of 100.00**Question 1** Correct Mark 1.00 out of 1.00

A lexical analyzer is a pattern matcher.

Select one:

 True ✓ False

The correct answer is 'True'.

Question 2

Correct

Mark 1.00 out of 1.00

There are three reasons why lexical analysis is separated from syntax analysis.

Which one of the following is not one of them?

Select one:

- a. Efficiency
- b. Portability
- c. Simplicity
- d. Cost ✓

Your answer is correct.

The correct answer is: Cost

Question 3

Correct

Mark 1.00 out of 1.00

A top-down parser builds a parse tree in _____.

Select one:

- a. preorder ✓
- b. inorder
- c. no order
- d. postorder

Your answer is correct.

The correct answer is: preorder

Question 4

Correct Mark 1.00 out of 1.00

Syntax analysis is often called parsing.

Select one:

- True ✓
- False

The correct answer is 'True'.



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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Sunday, 22 January 2017, 3:39 PM

State Finished

Completed on Sunday, 22 January 2017, 3:48 PM

Time taken 9 mins 16 secs

Marks 3.00/5.00

Grade **60.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

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

Select one:

- a. AWK
- b. Cobol X
- c. Fortran
- d. Scitran
- e. Algol

Your answer is incorrect.

The correct answer is: Fortran



Question 2

Incorrect

Mark 0.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. FORTRAN
- b. ALGOL
- c. Python
- d. LISP ✗
- e. JAVA

Your answer is incorrect.

The correct answer is: ALGOL

Question 3

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. All of them ✓
- c. To be able to select languages more effectively
- d. To increase our capacity to use different constructs

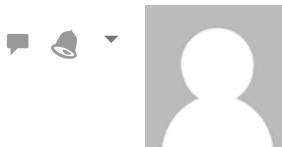
Your answer is correct.

The correct answer is: All of them





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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Sunday, 29 January 2017, 8:28 PM

State Finished

Completed on Sunday, 29 January 2017, 8:38 PM

Time taken 9 mins 45 secs

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

What is the first AI language?

Select one:

- a. PYTHON
- b. LISP ✓
- c. FORTRAN
- d. JAVA

The correct answer is: LISP



Question 2

Incorrect

Mark 0.00 out of 1.00

```
If ( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. C
- b. APL
- c. ALGOL
- d. Speedcoding ✗
- e. Fortran

The correct answer is: Fortran

Question 3

Correct

Mark 1.00 out of 1.00

What is the first Programming Language?

Select one:

- a. Algol 58
- b. Zuse's Plankalkul ✓
- c. APL
- d. Fortran I

The correct answer is: Zuse's Plankalkul





Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Sunday, 22 January 2017, 3:49 PM

State Finished

Completed on Sunday, 22 January 2017, 3:58 PM

Time taken 9 mins 17 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00



Question 1

Correct

Mark 1.00 out of 1.00

Please match the steps for Hybrid Implementation process.

Step 5	Interpreter	✓
Step 4	Intermediate Code Generator	✓
Step 2	Lexical Analyzer	✓
Step 1	Source Program	✓
Step 3	Syntax Analyzer	✓
Step 6	Result	✓

Your answer is correct.

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

Question 2

Correct

Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

- True ✓
- False

The correct answer is 'True'.



Question 3

Correct Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Python
- b. Cobol
- c. C++
- d. Java
- e. C ✓

Your answer is correct.

The correct answer is: C

Question 4

Correct Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Cobol ✓
- b. Fortran
- c. AWK
- d. Pascal
- e. Algol

Your answer is correct.

The correct answer is: Cobol



Question 5

Correct Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Lisp



Question 4

Correct Mark 1.00 out of 1.00

_____ first used in Fortran IV.

Select one:

- a. Explicit data type declarations ✓
- b. Pointers
- c. All
- d. Arrays

The correct answer is: Explicit data type declarations

Question 5

Correct Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Fortran ✓
- b. Algol
- c. Java
- d. C
- e. Smalltalk

The correct answer is: Fortran



Question 4

Correct Mark 1.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Age ✓
- b. Writability
- c. Reliability
- d. Readability
- e. Cost

Your answer is correct.

The correct answer is: Age

Question 5

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. Algol
- d. Lisp ✓
- e. Pascal

Your answer is correct.

The correct answer is: Lisp





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INSPIRATION INNOVATION GLOBAL COMPETENCE



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Sunday, 29 January 2017, 8:53 PM

State Finished

Completed on Sunday, 29 January 2017, 8:57 PM

Time taken 4 mins 36 secs

Marks 3.00/5.00

Grade **60.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

```
If ( a > b )
```

```
print "Yes"
```

This logic had been implemented in which programming language first? (conditional branching)

Select one:

- a. APL
- b. Speedcoding
- c. Fortran X
- d. C
- e. ALGOL

The correct answer is: Speedcoding



Question 2

Correct Mark 1.00 out of 1.00

Why source code usage was developed instead of using object/machine code?

Select one:

- a. Machine code has poor readability
- b. Machine code was hard to modify
- c. Machine code has no indexing
- d. All of them ✓

The correct answer is: All of them

Question 3

Correct Mark 1.00 out of 1.00

Which one is not correct about Zuse's Plankalkul?

Select one:

- a. Has advanced data structures
- b. Designed in 1945
- c. Implemented in 1972 ✓
- d. Has invariants

The correct answer is: Implemented in 1972



Question 4

Correct Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Algol
- b. Java
- c. C
- d. Smalltalk
- e. Fortran ✓

The correct answer is: Fortran

Question 5

Incorrect Mark 0.00 out of 1.00

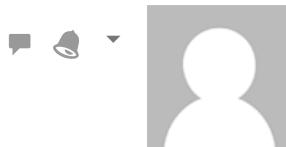
What is the first Programming Language?

Select one:

- a. Algol 58
- b. APL
- c. Fortran I ✗
- d. Zuse's Plankalkul

The correct answer is: Zuse's Plankalkul





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

Started on Sunday, 12 February 2017, 10:10 PM

State Finished

Completed on Sunday, 12 February 2017, 10:13 PM

Time taken 2 mins 30 secs

Marks 7.00/7.00

Grade **100.00** out of 100.00



Question 1

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

Your answer is correct.

The correct answer is: * has precedence over +

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

What is the lowest level syntactic unit?

Select one:

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

Your answer is correct.

The correct answer is: lexeme

Question 4

Correct Mark 1.00 out of 1.00

The following grammar is ambiguous:

$$\begin{aligned} <S> &\rightarrow <A> \\ <A> &\rightarrow <A> + <A> \mid <\text{id}> \\ <\text{id}> &\rightarrow a \mid b \mid c \end{aligned}$$

Select one:

- True ✓
- False

The correct answer is 'True'.



Question 5

Correct Mark 1.00 out of 1.00

The following grammar cannot produce?

```
<assign> → <id> = <expr>
<id> → A | B | C
<expr> → <expr> + <term>
| <term>
<term> → <term> * <factor>
| <factor>
<factor> → ( <expr> )
| <id>
```

Select one:

- a. $A = (B+B)^* C$
- b. $A = (A+B)^* 3 \checkmark$
- c. $C = (A+(C+C))^* C$
- d. $A = (A+B)^* C$

Your answer is correct.

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



Question 6

Correct Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Pascal
- b. Cobol ✓
- c. Fortran
- d. Algol
- e. AWK

Your answer is correct.

The correct answer is: Cobol

Question 7

Correct Mark 1.00 out of 1.00

Why should we study programming languages?

Select one:

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

Your answer is correct.

The correct answer is: All of them





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INSPIRATION INNOVATION GLOBAL COMPETENCE



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February
> Homework 5

Started on Sunday, 19 February 2017, 10:05 PM

State Finished

Completed on Sunday, 19 February 2017, 10:06 PM

Time taken 59 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00

Question 1 Correct Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

True ✓

False

The correct answer is 'True'.



Question 2

Correct Mark 1.00 out of 1.00

Type compatibility can be checked in context-free grammars.

Select one:

- True
- False ✓

Attribute grammar can check type compatibility.

The correct answer is 'False'.

Question 3

Correct Mark 1.00 out of 1.00

What does the following attribute grammar mean:

Syntax rule: `<fun_def> → function <fun_name>[1]`

`<fun_body> end <fun_name>[2];`

Predicate: `<fun_name>[1].string == <fun_name>[2].string`

Select one:

- a. Functions cannot be defined without variables
- b. The name on the end of a function must match the functions name ✓
- c. Functions should have two variables
- d. Syntax rule should come before predicate rule when writing in that programming language

Your answer is correct.

The correct answer is: The name on the end of a function must match the functions name



Question 4

Correct Mark 1.00 out of 1.00

A(n) _____ is a device used to describe more of the structure of a programming language than can be described with a context-free- grammar.

Select one:

- a. attribute grammar ✓
- b. static semantics
- c. Extended BNF
- d. recognizer

Your answer is correct.

The correct answer is: attribute grammar

Question 5

Correct Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

Select one:

- True ✓
- False

The correct answer is 'True'.





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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 20 February - 26 February
> Homework 6 (Slides: Ch4 - Part 1)

Started on Wednesday, 22 February 2017, 8:57 PM

State Finished

Completed on Wednesday, 22 February 2017, 8:58 PM

Time taken 1 min 14 secs

Marks 4.00/4.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

A lexical analyzer is a pattern matcher.

Select one:

- True ✓
 False

The correct answer is 'True'.

Question 2

Correct Mark 1.00 out of 1.00

There are three reasons why lexical analysis is separated from syntax analysis. Which one of the following is not one of them?

Select one:

- a. Efficiency
- b. Simplicity
- c. Cost ✓
- d. Portability

Your answer is correct.

The correct answer is: Cost

Question 3

Correct Mark 1.00 out of 1.00

A top-down parser builds a parse tree in _____.

Select one:

- a. no order
- b. inorder
- c. preorder ✓
- d. postorder

Your answer is correct.

The correct answer is: preorder

Question 4

Correct Mark 1.00 out of 1.00

What is the front end of a syntax analyzer?

Select one:

- a. Lexical analyzer ✓
- b. Semantic Analyzer
- c. Attribute Grammars
- d. Context-free grammars

Your answer is correct.

The correct answer is: Lexical analyzer



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INSPIRATION INNOVATION GLOBAL COMPETENCE



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Sunday, 22 January 2017, 10:03 PM

State Finished

Completed on Sunday, 22 January 2017, 10:12 PM

Time taken 9 mins 5 secs

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Age ✓
- b. Readability
- c. Writability
- d. Reliability
- e. Cost

Your answer is correct.

The correct answer is: Age

Question 2

Correct Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Pascal
- b. Fortran
- c. Cobol ✓
- d. Algol
- e. AWK

Your answer is correct.

The correct answer is: Cobol

Question 3

Incorrect Mark 0.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. Python
- b. LISP ✗
- c. ALGOL
- d. FORTRAN
- e. JAVA

Your answer is incorrect.

The correct answer is: ALGOL

Question 4

Correct Mark 1.00 out of 1.00

Why should we study programming languages?

Select one:

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

Your answer is correct.

The correct answer is: All of them

Question 5

Correct Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

- True ✓
- False

The correct answer is 'True'.



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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Sunday, 22 January 2017, 10:14 PM

State Finished

Completed on Sunday, 22 January 2017, 10:24 PM

Time taken 9 mins 52 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Cobol
- b. Python
- c. Java
- d. C++
- e. C ✓

Your answer is correct.

The correct answer is: C



Question 2

Correct

Mark 1.00 out of 1.00

Please match the steps for Hybrid Implementation process.

- | | | |
|--------|-----------------------------|---|
| Step 1 | Source Program | ✓ |
| Step 2 | Lexical Analyzer | ✓ |
| Step 6 | Result | ✓ |
| Step 4 | Intermediate Code Generator | ✓ |
| Step 5 | Interpreter | ✓ |
| Step 3 | Syntax Analyzer | ✓ |

Your answer is correct.

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

Question 3

Correct

Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Lisp



Question 4

Correct Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Fortran

Question 5

Correct Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

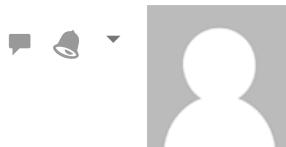
Select one:

- a. Algol
- b. Cobol ✓
- c. Fortran
- d. Pascal
- e. AWK

Your answer is correct.

The correct answer is: Cobol





Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Tuesday, 31 January 2017, 10:58 PM

State Finished

Completed on Tuesday, 31 January 2017, 11:08 PM

Time taken 10 mins 1 sec

Marks 3.00/5.00

Grade **60.00** out of 100.00



Question 1

Correct Mark 1.00 out of 1.00

```
If ( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. C
- b. Fortran ✓
- c. APL
- d. ALGOL
- e. Speedcoding

The correct answer is: Fortran

Question 2

Incorrect Mark 0.00 out of 1.00

Which one is not correct about Zuse's Plankalkul?

Select one:

- a. Designed in 1945 ✗
- b. Has invariants
- c. Implemented in 1972
- d. Has advanced data structures

The correct answer is: Implemented in 1972



Question 3

Correct Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Algol
- b. Fortran ✓
- c. Java
- d. C
- e. Smalltalk

The correct answer is: Fortran

Question 4

Incorrect Mark 0.00 out of 1.00

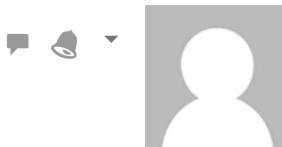
_____ first used in Fortran IV.

Select one:

- a. All
- b. Explicit data type declarations
- c. Arrays ✗
- d. Pointers

The correct answer is: Explicit data type declarations





Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Tuesday, 31 January 2017, 11:11 PM

State Finished

Completed on Tuesday, 31 January 2017, 11:21 PM

Time taken 9 mins 58 secs

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

```
If ( a > b )
```

```
print "Yes"
```

This logic had been implemented in which programming language first? (conditional branching)

Select one:

- a. Speedcoding ✓
- b. APL
- c. ALGOL
- d. C
- e. Fortran

The correct answer is: Speedcoding

Question 4

Correct Mark 1.00 out of 1.00

What is the first Programming Language?

Select one:

- a. Fortran I
- b. APL
- c. Algol 58
- d. Zuse's Plankalkul ✓

The correct answer is: Zuse's Plankalkul

Question 5

Incorrect Mark 0.00 out of 1.00

```
If ( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. Speedcoding ✗
- b. Fortran
- c. ALGOL
- d. C
- e. APL

The correct answer is: Fortran



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

Started on Sunday, 12 February 2017, 10:33 PM

State Finished

Completed on Sunday, 12 February 2017, 10:43 PM

Time taken 10 mins 2 secs

Marks 3.00/7.00

Grade **42.86** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

The sentences of the language are generated through a sequence of applications of the rules, beginning with a special nonterminal of the grammar called the start symbol. This sequence of rule applications is called a derivation.

Select one:

- True ✓
 False

The correct answer is 'True'.



Question 2

Not answered

Marked 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 incorrect.

The correct answer is: * has precedence over +



Question 3

Not answered

Marked out of 1.00

The following grammar cannot produce?

```
<assign> → <id> = <expr>
<id> → A | B | C
<expr> → <expr> + <term>
| <term>
<term> → <term> * <factor>
| <factor>
<factor> → ( <expr> )
| <id>
```

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 incorrect.

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



Question 4

Not answered

Marked out of 1.00

What is the lowest level syntactic unit?

Select one:

- a. EBNF
- b. lexeme
- c. grammar
- d. BNF

Your answer is incorrect.

The correct answer is: lexeme

Question 5

Incorrect

Mark 0.00 out of 1.00

Operator precedence can be achieved in _____ grammars.

Select one:

- a. BNF X
- b. non-ambiguous
- c. token
- d. ambiguous

Your answer is incorrect.

The correct answer is: non-ambiguous



Question 6

Correct Mark 1.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. LISP
- b. ALGOL ✓
- c. Python
- d. JAVA
- e. FORTRAN

Your answer is correct.

The correct answer is: ALGOL

Question 7

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. All of them ✓
- c. To increase our capacity to use different constructs
- d. To be able to select languages more effectively

Your answer is correct.

The correct answer is: All of them





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INSPIRATION INNOVATION GLOBAL COMPETENCE



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

Started on Sunday, 12 February 2017, 10:57 PM

State Finished

Completed on Sunday, 12 February 2017, 11:07 PM

Time taken 10 mins 1 sec

Marks 6.00/7.00

Grade **85.71** out of 100.00

Question 1

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 2

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. flexible
- b. unambiguous
- c. readable
- d. ambiguous ✓

Your answer is correct.

The correct answer is: ambiguous

Question 3

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 4

Incorrect

Mark 0.00 out of 1.00

The following grammar cannot produce?

```
<assign> → <id> = <expr>
<id> → A | B | C
<expr> → <expr> + <term>
| <term>
<term> → <term> * <factor>
| <factor>
<factor> → ( <expr> )
| <id>
```

Select one:

- a. $A = (A+B)^* 3$
- b. $A = (B+B)^* C$
- c. $A = (A+B)^* C$
- d. $C = (A+(C+C))^* C \text{ X}$

Your answer is incorrect.

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



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 business purposes?

Select one:

- a. Fortran
- b. Pascal
- c. Cobol ✓
- d. Algol
- e. AWK

Your answer is correct.

The correct answer is: Cobol

Question 7

Correct Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. C++
- b. Cobol
- c. C ✓
- d. Python
- e. Java

Your answer is correct.

The correct answer is: C





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

Started on Sunday, 12 February 2017, 11:08 PM

State Finished

Completed on Sunday, 12 February 2017, 11:18 PM

Time taken 9 mins 50 secs

Marks 7.00/7.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

Operator precedence can be achieved in _____ grammars.

Select one:

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

Your answer is correct.

The correct answer is: non-ambiguous

Question 2

Correct Mark 1.00 out of 1.00

The sentences of the language are generated through a sequence of applications of the rules, beginning with a special nonterminal of the grammar called the start symbol. This sequence of rule applications is called a derivation.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 3

Correct Mark 1.00 out of 1.00

What is the lowest level syntactic unit?

Select one:

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

Your answer is correct.

The correct answer is: lexeme

Question 4

Correct Mark 1.00 out of 1.00

The following grammar is ambiguous:

$$\begin{aligned} <S> &\rightarrow <A> \\ <A> &\rightarrow <A> + <A> \mid <\text{id}> \\ <\text{id}> &\rightarrow a \mid b \mid c \end{aligned}$$

Select one:

- True ✓
 False

The correct answer is 'True'.

Question 5

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. ambiguous ✓
 b. readable
 c. flexible
 d. unambiguous

Your answer is correct.

The correct answer is: ambiguous

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

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



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February
> Homework 5

Started on Sunday, 19 February 2017, 10:07 PM

State Finished

Completed on Sunday, 19 February 2017, 10:12 PM

Time taken 5 mins 10 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00



Question 1

Correct Mark 1.00 out of 1.00

What does the following attribute grammar mean:

Syntax rule: `<fun_def> → function <fun_name>[1]`

`<fun_body> end <fun_name>[2];`

Predicate: `<fun_name>[1].string == <fun_name>[2].string`

Select one:

- a. Functions should have two variables
- b. Functions cannot be defined without variables
- c. Syntax rule should come before predicate rule when writing in that programming language
- d. The name on the end of a function must match the functions name ✓

Your answer is correct.

The correct answer is: The name on the end of a function must match the functions name

Question 2

Correct Mark 1.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To find inherited attributes
- b. To find intrinsic attributes
- c. To find synthesized attributes
- d. To check ambiguity ✓

Your answer is correct.

The correct answer is: To check ambiguity



Question 3

Correct Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 4

Correct Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 5

Correct Mark 1.00 out of 1.00

The static semantics of a language deals with the syntax rather than semantics.

Select one:

- True ✓
- False

True

The correct answer is 'True'.





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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 20 February - 26 February
> Homework 6 (Slides: Ch4 - Part 1)

Started on Sunday, 26 February 2017, 9:52 PM

State Finished

Completed on Sunday, 26 February 2017, 10:01 PM

Time taken 8 mins 46 secs

Marks 4.00/4.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

A lexical analyzer is a pattern matcher.

Select one:

True ✓

False

The correct answer is 'True'.



Question 2

Correct Mark 1.00 out of 1.00

Parsing algorithms that work for any unambiguous grammar are complicated and inefficient. The complexity of those algorithms is _____.

Select one:

- a. $O(N)$
- b. $O(N^2)$
- c. $O(\log N)$
- d. $O(N^3)$ ✓

Your answer is correct.

The correct answer is: $O(N^3)$

Question 3

Correct Mark 1.00 out of 1.00

A recursive-descent parser is a coded version of a syntax analyzer based directly on the BNF description of the syntax of language.

Select one:

- True ✓
- False

The correct answer is 'True'.



Question 4

Correct Mark 1.00 out of 1.00

Syntax analysis is often called parsing.

Select one:

- True ✓
- False

The correct answer is 'True'.





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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Sunday, 22 January 2017, 3:39 PM

State Finished

Completed on Sunday, 22 January 2017, 3:48 PM

Time taken 9 mins 16 secs

Marks 3.00/5.00

Grade **60.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

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

Select one:

- a. AWK
- b. Cobol X
- c. Fortran
- d. Scitran
- e. Algol

Your answer is incorrect.

The correct answer is: Fortran



Question 2

Incorrect

Mark 0.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. FORTRAN
- b. ALGOL
- c. Python
- d. LISP ✗
- e. JAVA

Your answer is incorrect.

The correct answer is: ALGOL

Question 3

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. All of them ✓
- c. To be able to select languages more effectively
- d. To increase our capacity to use different constructs

Your answer is correct.

The correct answer is: All of them





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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Sunday, 29 January 2017, 8:28 PM

State Finished

Completed on Sunday, 29 January 2017, 8:38 PM

Time taken 9 mins 45 secs

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

What is the first AI language?

Select one:

- a. PYTHON
- b. LISP ✓
- c. FORTRAN
- d. JAVA

The correct answer is: LISP



Question 2

Incorrect

Mark 0.00 out of 1.00

```
If ( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. C
- b. APL
- c. ALGOL
- d. Speedcoding ✗
- e. Fortran

The correct answer is: Fortran

Question 3

Correct

Mark 1.00 out of 1.00

What is the first Programming Language?

Select one:

- a. Algol 58
- b. Zuse's Plankalkul ✓
- c. APL
- d. Fortran I

The correct answer is: Zuse's Plankalkul





Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Sunday, 22 January 2017, 3:49 PM

State Finished

Completed on Sunday, 22 January 2017, 3:58 PM

Time taken 9 mins 17 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00



Question 1

Correct

Mark 1.00 out of 1.00

Please match the steps for Hybrid Implementation process.

- | | | |
|--------|-----------------------------|---|
| Step 5 | Interpreter | ✓ |
| Step 4 | Intermediate Code Generator | ✓ |
| Step 2 | Lexical Analyzer | ✓ |
| Step 1 | Source Program | ✓ |
| Step 3 | Syntax Analyzer | ✓ |
| Step 6 | Result | ✓ |

Your answer is correct.

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

Question 2

Correct

Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

- True ✓
- False

The correct answer is 'True'.



Question 3

Correct Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Python
- b. Cobol
- c. C++
- d. Java
- e. C ✓

Your answer is correct.

The correct answer is: C

Question 4

Correct Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Cobol ✓
- b. Fortran
- c. AWK
- d. Pascal
- e. Algol

Your answer is correct.

The correct answer is: Cobol



Question 5

Correct Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Lisp



Question 4

Correct Mark 1.00 out of 1.00

_____ first used in Fortran IV.

Select one:

- a. Explicit data type declarations ✓
- b. Pointers
- c. All
- d. Arrays

The correct answer is: Explicit data type declarations

Question 5

Correct Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Fortran ✓
- b. Algol
- c. Java
- d. C
- e. Smalltalk

The correct answer is: Fortran



Question 4

Correct Mark 1.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Age ✓
- b. Writability
- c. Reliability
- d. Readability
- e. Cost

Your answer is correct.

The correct answer is: Age

Question 5

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. Algol
- d. Lisp ✓
- e. Pascal

Your answer is correct.

The correct answer is: Lisp





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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Sunday, 29 January 2017, 8:53 PM

State Finished

Completed on Sunday, 29 January 2017, 8:57 PM

Time taken 4 mins 36 secs

Marks 3.00/5.00

Grade **60.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

```
If ( a > b )
```

```
print "Yes"
```

This logic had been implemented in which programming language first? (conditional branching)

Select one:

- a. APL
- b. Speedcoding
- c. Fortran X
- d. C
- e. ALGOL

The correct answer is: Speedcoding



Question 2

Correct

Mark 1.00 out of 1.00

Why source code usage was developed instead of using object/machine code?

Select one:

- a. Machine code has poor readability
- b. Machine code was hard to modify
- c. Machine code has no indexing
- d. All of them ✓

The correct answer is: All of them

Question 3

Correct

Mark 1.00 out of 1.00

Which one is not correct about Zuse's Plankalkul?

Select one:

- a. Has advanced data structures
- b. Designed in 1945
- c. Implemented in 1972 ✓
- d. Has invariants

The correct answer is: Implemented in 1972



Question 4

Correct Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Algol
- b. Java
- c. C
- d. Smalltalk
- e. Fortran ✓

The correct answer is: Fortran

Question 5

Incorrect Mark 0.00 out of 1.00

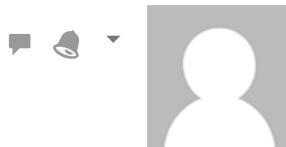
What is the first Programming Language?

Select one:

- a. Algol 58
- b. APL
- c. Fortran I ✗
- d. Zuse's Plankalkul

The correct answer is: Zuse's Plankalkul





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

Started on Sunday, 12 February 2017, 10:10 PM

State Finished

Completed on Sunday, 12 February 2017, 10:13 PM

Time taken 2 mins 30 secs

Marks 7.00/7.00

Grade **100.00** out of 100.00



Question 1

Correct Mark 1.00 out of 1.00

In the following grammar we can say that:

```
<assign> → <id> = <expr>
<id> → A | B | C
<expr> → <expr> + <term>
| <term>
<term> → <term> * <factor>
| <factor>
<factor> → ( <expr> )
| <id>
```

Select one:

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

Your answer is correct.

The correct answer is: * has precedence over +

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

What is the lowest level syntactic unit?

Select one:

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

Your answer is correct.

The correct answer is: lexeme

Question 4

Correct Mark 1.00 out of 1.00

The following grammar is ambiguous:

$$\begin{aligned} <S> &\rightarrow <A> \\ <A> &\rightarrow <A> + <A> \mid <\text{id}> \\ <\text{id}> &\rightarrow a \mid b \mid c \end{aligned}$$

Select one:

- True ✓
- False

The correct answer is 'True'.



Question 5

Correct Mark 1.00 out of 1.00

The following grammar cannot produce?

```
<assign> → <id> = <expr>
<id> → A | B | C
<expr> → <expr> + <term>
| <term>
<term> → <term> * <factor>
| <factor>
<factor> → ( <expr> )
| <id>
```

Select one:

- a. $A = (B+B)^* C$
- b. $A = (A+B)^* 3 \checkmark$
- c. $C = (A+(C+C))^* C$
- d. $A = (A+B)^* C$

Your answer is correct.

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



Question 6

Correct Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Pascal
- b. Cobol ✓
- c. Fortran
- d. Algol
- e. AWK

Your answer is correct.

The correct answer is: Cobol

Question 7

Correct Mark 1.00 out of 1.00

Why should we study programming languages?

Select one:

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

Your answer is correct.

The correct answer is: All of them





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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February
> Homework 5

Started on Sunday, 19 February 2017, 10:05 PM

State Finished

Completed on Sunday, 19 February 2017, 10:06 PM

Time taken 59 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

True ✓

False

The correct answer is 'True'.



Question 2

Correct Mark 1.00 out of 1.00

Type compatibility can be checked in context-free grammars.

Select one:

- True
- False ✓

Attribute grammar can check type compatibility.

The correct answer is 'False'.

Question 3

Correct Mark 1.00 out of 1.00

What does the following attribute grammar mean:

Syntax rule: `<fun_def> → function <fun_name>[1]`

`<fun_body> end <fun_name>[2];`

Predicate: `<fun_name>[1].string == <fun_name>[2].string`

Select one:

- a. Functions cannot be defined without variables
- b. The name on the end of a function must match the functions name ✓
- c. Functions should have two variables
- d. Syntax rule should come before predicate rule when writing in that programming language

Your answer is correct.

The correct answer is: The name on the end of a function must match the functions name



Question 4

Correct Mark 1.00 out of 1.00

A(n) _____ is a device used to describe more of the structure of a programming language than can be described with a context-free- grammar.

Select one:

- a. attribute grammar ✓
- b. static semantics
- c. Extended BNF
- d. recognizer

Your answer is correct.

The correct answer is: attribute grammar

Question 5

Correct Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

Select one:

- True ✓
- False

The correct answer is 'True'.





Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 20 February - 26 February
> Homework 6 (Slides: Ch4 - Part 1)

Started on Wednesday, 22 February 2017, 8:57 PM

State Finished

Completed on Wednesday, 22 February 2017, 8:58 PM

Time taken 1 min 14 secs

Marks 4.00/4.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

A lexical analyzer is a pattern matcher.

Select one:

True ✓

False

The correct answer is 'True'.

Question 2

Correct Mark 1.00 out of 1.00

There are three reasons why lexical analysis is separated from syntax analysis. Which one of the following is not one of them?

Select one:

- a. Efficiency
- b. Simplicity
- c. Cost ✓
- d. Portability

Your answer is correct.

The correct answer is: Cost

Question 3

Correct Mark 1.00 out of 1.00

A top-down parser builds a parse tree in _____.

Select one:

- a. no order
- b. inorder
- c. preorder ✓
- d. postorder

Your answer is correct.

The correct answer is: preorder

Question 4

Correct Mark 1.00 out of 1.00

What is the front end of a syntax analyzer?

Select one:

- a. Lexical analyzer ✓
- b. Semantic Analyzer
- c. Attribute Grammars
- d. Context-free grammars

Your answer is correct.

The correct answer is: Lexical analyzer



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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Sunday, 22 January 2017, 10:03 PM

State Finished

Completed on Sunday, 22 January 2017, 10:12 PM

Time taken 9 mins 5 secs

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Age ✓
- b. Readability
- c. Writability
- d. Reliability
- e. Cost

Your answer is correct.

The correct answer is: Age

Question 2

Correct Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Pascal
- b. Fortran
- c. Cobol ✓
- d. Algol
- e. AWK

Your answer is correct.

The correct answer is: Cobol

Question 3

Incorrect Mark 0.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. Python
- b. LISP ✗
- c. ALGOL
- d. FORTRAN
- e. JAVA

Your answer is incorrect.

The correct answer is: ALGOL

Question 4

Correct Mark 1.00 out of 1.00

Why should we study programming languages?

Select one:

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

Your answer is correct.

The correct answer is: All of them

Question 5

Correct Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

- True ✓
- False

The correct answer is 'True'.



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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Sunday, 22 January 2017, 10:14 PM

State Finished

Completed on Sunday, 22 January 2017, 10:24 PM

Time taken 9 mins 52 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Cobol
- b. Python
- c. Java
- d. C++
- e. C ✓

Your answer is correct.

The correct answer is: C



Question 2

Correct

Mark 1.00 out of 1.00

Please match the steps for Hybrid Implementation process.

- | | | |
|--------|-----------------------------|---|
| Step 1 | Source Program | ✓ |
| Step 2 | Lexical Analyzer | ✓ |
| Step 6 | Result | ✓ |
| Step 4 | Intermediate Code Generator | ✓ |
| Step 5 | Interpreter | ✓ |
| Step 3 | Syntax Analyzer | ✓ |

Your answer is correct.

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

Question 3

Correct

Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Lisp



Question 4

Correct Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Fortran

Question 5

Correct Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

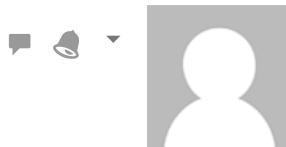
Select one:

- a. Algol
- b. Cobol ✓
- c. Fortran
- d. Pascal
- e. AWK

Your answer is correct.

The correct answer is: Cobol





Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Tuesday, 31 January 2017, 10:58 PM

State Finished

Completed on Tuesday, 31 January 2017, 11:08 PM

Time taken 10 mins 1 sec

Marks 3.00/5.00

Grade **60.00** out of 100.00



Question 1

Correct Mark 1.00 out of 1.00

```
If ( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. C
- b. Fortran ✓
- c. APL
- d. ALGOL
- e. Speedcoding

The correct answer is: Fortran

Question 2

Incorrect Mark 0.00 out of 1.00

Which one is not correct about Zuse's Plankalkul?

Select one:

- a. Designed in 1945 ✗
- b. Has invariants
- c. Implemented in 1972
- d. Has advanced data structures

The correct answer is: Implemented in 1972



Question 3

Correct Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Algol
- b. Fortran ✓
- c. Java
- d. C
- e. Smalltalk

The correct answer is: Fortran

Question 4

Incorrect Mark 0.00 out of 1.00

_____ first used in Fortran IV.

Select one:

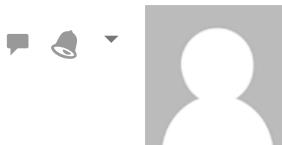
- a. All
- b. Explicit data type declarations
- c. Arrays ✗
- d. Pointers

The correct answer is: Explicit data type declarations





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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Tuesday, 31 January 2017, 11:11 PM

State Finished

Completed on Tuesday, 31 January 2017, 11:21 PM

Time taken 9 mins 58 secs

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

```
If ( a > b )
```

```
print "Yes"
```

This logic had been implemented in which programming language first? (conditional branching)

Select one:

- a. Speedcoding ✓
- b. APL
- c. ALGOL
- d. C
- e. Fortran

The correct answer is: Speedcoding

Question 4

Correct Mark 1.00 out of 1.00

What is the first Programming Language?

Select one:

- a. Fortran I
- b. APL
- c. Algol 58
- d. Zuse's Plankalkul ✓

The correct answer is: Zuse's Plankalkul

Question 5

Incorrect Mark 0.00 out of 1.00

```
If ( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. Speedcoding ✗
- b. Fortran
- c. ALGOL
- d. C
- e. APL

The correct answer is: Fortran



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

Started on Sunday, 12 February 2017, 10:33 PM

State Finished

Completed on Sunday, 12 February 2017, 10:43 PM

Time taken 10 mins 2 secs

Marks 3.00/7.00

Grade **42.86** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

The sentences of the language are generated through a sequence of applications of the rules, beginning with a special nonterminal of the grammar called the start symbol. This sequence of rule applications is called a derivation.

Select one:

- True ✓
 False

The correct answer is 'True'.



Question 2

Not answered

Marked 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 incorrect.

The correct answer is: * has precedence over +



Question 3

Not answered

Marked out of 1.00

The following grammar cannot produce?

```
<assign> → <id> = <expr>
<id> → A | B | C
<expr> → <expr> + <term>
| <term>
<term> → <term> * <factor>
| <factor>
<factor> → ( <expr> )
| <id>
```

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 incorrect.

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



Question 4

Not answered

Marked out of 1.00

What is the lowest level syntactic unit?

Select one:

- a. EBNF
- b. lexeme
- c. grammar
- d. BNF

Your answer is incorrect.

The correct answer is: lexeme

Question 5

Incorrect

Mark 0.00 out of 1.00

Operator precedence can be achieved in _____ grammars.

Select one:

- a. BNF X
- b. non-ambiguous
- c. token
- d. ambiguous

Your answer is incorrect.

The correct answer is: non-ambiguous



Question 6

Correct Mark 1.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. LISP
- b. ALGOL ✓
- c. Python
- d. JAVA
- e. FORTRAN

Your answer is correct.

The correct answer is: ALGOL

Question 7

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. All of them ✓
- c. To increase our capacity to use different constructs
- d. To be able to select languages more effectively

Your answer is correct.

The correct answer is: All of them





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INSPIRATION INNOVATION GLOBAL COMPETENCE



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

Started on Sunday, 12 February 2017, 10:57 PM

State Finished

Completed on Sunday, 12 February 2017, 11:07 PM

Time taken 10 mins 1 sec

Marks 6.00/7.00

Grade **85.71** out of 100.00

Question 1

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 2

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. flexible
- b. unambiguous
- c. readable
- d. ambiguous ✓

Your answer is correct.

The correct answer is: ambiguous

Question 3

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 4

Incorrect

Mark 0.00 out of 1.00

The following grammar cannot produce?

```
<assign> → <id> = <expr>
<id> → A | B | C
<expr> → <expr> + <term>
| <term>
<term> → <term> * <factor>
| <factor>
<factor> → ( <expr> )
| <id>
```

Select one:

- a. $A = (A+B)^* 3$
- b. $A = (B+B)^* C$
- c. $A = (A+B)^* C$
- d. $C = (A+(C+C))^* C \text{ X}$

Your answer is incorrect.

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



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 business purposes?

Select one:

- a. Fortran
- b. Pascal
- c. Cobol ✓
- d. Algol
- e. AWK

Your answer is correct.

The correct answer is: Cobol

Question 7

Correct Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. C++
- b. Cobol
- c. C ✓
- d. Python
- e. Java

Your answer is correct.

The correct answer is: C





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

Started on Sunday, 12 February 2017, 11:08 PM

State Finished

Completed on Sunday, 12 February 2017, 11:18 PM

Time taken 9 mins 50 secs

Marks 7.00/7.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

Operator precedence can be achieved in _____ grammars.

Select one:

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

Your answer is correct.

The correct answer is: non-ambiguous

Question 2

Correct Mark 1.00 out of 1.00

The sentences of the language are generated through a sequence of applications of the rules, beginning with a special nonterminal of the grammar called the start symbol. This sequence of rule applications is called a derivation.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 3

Correct Mark 1.00 out of 1.00

What is the lowest level syntactic unit?

Select one:

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

Your answer is correct.

The correct answer is: lexeme

Question 4

Correct Mark 1.00 out of 1.00

The following grammar is ambiguous:

$$\begin{aligned} <S> &\rightarrow <A> \\ <A> &\rightarrow <A> + <A> \mid <\text{id}> \\ <\text{id}> &\rightarrow a \mid b \mid c \end{aligned}$$

Select one:

- True ✓
 False

The correct answer is 'True'.

Question 5

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. ambiguous ✓
 b. readable
 c. flexible
 d. unambiguous

Your answer is correct.

The correct answer is: ambiguous

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

Your answer is correct.

The correct answer is: Fortran

Question 7

Correct Mark 1.00 out of 1.00

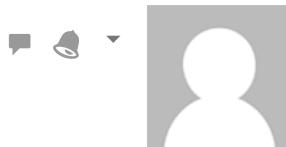
What is the legendary programming language that is especially used for AI?

Select one:

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

Your answer is correct.

The correct answer is: Lisp



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February
> Homework 5

Started on Sunday, 19 February 2017, 10:07 PM

State Finished

Completed on Sunday, 19 February 2017, 10:12 PM

Time taken 5 mins 10 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00



Question 1

Correct Mark 1.00 out of 1.00

What does the following attribute grammar mean:

Syntax rule: `<fun_def> → function <fun_name>[1]`

`<fun_body> end <fun_name>[2];`

Predicate: `<fun_name>[1].string == <fun_name>[2].string`

Select one:

- a. Functions should have two variables
- b. Functions cannot be defined without variables
- c. Syntax rule should come before predicate rule when writing in that programming language
- d. The name on the end of a function must match the functions name ✓

Your answer is correct.

The correct answer is: The name on the end of a function must match the functions name

Question 2

Correct Mark 1.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To find inherited attributes
- b. To find intrinsic attributes
- c. To find synthesized attributes
- d. To check ambiguity ✓

Your answer is correct.

The correct answer is: To check ambiguity



Question 3

Correct Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 4

Correct Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 5

Correct Mark 1.00 out of 1.00

The static semantics of a language deals with the syntax rather than semantics.

Select one:

- True ✓
- False

True

The correct answer is 'True'.





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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 20 February - 26 February
> Homework 6 (Slides: Ch4 - Part 1)

Started on Sunday, 26 February 2017, 9:52 PM

State Finished

Completed on Sunday, 26 February 2017, 10:01 PM

Time taken 8 mins 46 secs

Marks 4.00/4.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

A lexical analyzer is a pattern matcher.

Select one:

True ✓

False

The correct answer is 'True'.



Question 2

Correct Mark 1.00 out of 1.00

Parsing algorithms that work for any unambiguous grammar are complicated and inefficient. The complexity of those algorithms is _____.

Select one:

- a. $O(N)$
- b. $O(N^2)$
- c. $O(\log N)$
- d. $O(N^3)$ ✓

Your answer is correct.

The correct answer is: $O(N^3)$

Question 3

Correct Mark 1.00 out of 1.00

A recursive-descent parser is a coded version of a syntax analyzer based directly on the BNF description of the syntax of language.

Select one:

- True ✓
- False

The correct answer is 'True'.



Question 4

Correct Mark 1.00 out of 1.00

Syntax analysis is often called parsing.

Select one:

- True ✓
- False

The correct answer is 'True'.



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**Medina Colic**

Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Thursday, 19 January 2017, 1:39 AM**State** Finished**Completed on** Thursday, 19 January 2017, 1:43 AM**Time taken** 3 mins 35 secs**Marks** 4.00/5.00**Grade** **80.00** out of 100.00**Question 1**

Correct Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

 True ✓ False

The correct answer is 'True'.

Question 2

Correct

Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Lisp

Question 3

Incorrect

Mark 0.00 out of 1.00

Why should we study programming languages?

Select one:

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

Your answer is incorrect.

The correct answer is: All of them

Question 4

Correct

Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Algol
- b. Cobol ✓
- c. AWK
- d. Fortran
- e. Pascal

Your answer is correct.

The correct answer is: Cobol

Question 5

Correct

Mark 1.00 out of 1.00

Please match the steps for Hybrid Implementation process.

- | | | |
|--------|-----------------------------|---|
| Step 4 | Intermediate Code Generator | ✓ |
| Step 5 | Interpreter | ✓ |
| Step 1 | Source Program | ✓ |
| Step 6 | Result | ✓ |
| Step 2 | Lexical Analyzer | ✓ |
| Step 3 | Syntax Analyzer | ✓ |

Your answer is correct.

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

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Thursday, 19 January 2017, 1:44 AM

State Finished

Completed on Thursday, 19 January 2017, 1:49 AM

Time taken 5 mins 13 secs

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. JAVA
- b. FORTRAN
- c. LISP ✗
- d. ALGOL
- e. Python

Your answer is incorrect.

The correct answer is: ALGOL

Question 2

Correct

Mark 1.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Cost
- b. Reliability
- c. Age ✓
- d. Writability
- e. Readability

Your answer is correct.

The correct answer is: Age

Question 3

Correct

Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Fortran

Question 4

Correct

Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Python
- b. Cobol
- c. C++
- d. C ✓
- e. Java

Your answer is correct.

The correct answer is: C

Question 5

Correct

Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Fortran
- b. AWK
- c. Pascal
- d. Algol
- e. Cobol ✓

Your answer is correct.

The correct answer is: Cobol

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Thursday, 19 January 2017, 1:51 AM

State Finished

Completed on Thursday, 19 January 2017, 1:56 AM

Time taken 5 mins 11 secs

Marks 5.00/5.00

Grade 100.00 out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

True ✓

False

The correct answer is 'True'.

Question 2

Correct

Mark 1.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Cost
- b. Writability
- c. Readability
- d. Reliability
- e. Age ✓

Your answer is correct.

The correct answer is: Age

Question 3

Correct

Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Python
- b. C++
- c. Java
- d. Cobol
- e. C ✓

Your answer is correct.

The correct answer is: C

Question 4

Correct Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Fortran

Question 5

Correct

Mark 1.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. Python
- b. FORTRAN
- c. ALGOL ✓
- d. LISP
- e. JAVA

Your answer is correct.

The correct answer is: ALGOL

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Thursday, 26 January 2017, 2:59 PM

State Finished

Completed on Thursday, 26 January 2017, 3:07 PM

Time taken 8 mins 1 sec

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Smalltalk
- b. Java
- c. Algol
- d. Fortran ✓
- e. C

The correct answer is: Fortran

Question 2

Correct Mark 1.00 out of 1.00

_____ first used in Fortran IV.

Select one:

- a. Pointers
- b. Explicit data type declarations ✓
- c. All
- d. Arrays

The correct answer is: Explicit data type declarations

Question 3

Incorrect Mark 0.00 out of 1.00

```
If ( a > b )
```

```
    print "Yes"
```

This logic had been implemented in which programming language first?
(conditional branching)

Select one:

- a. Fortran ✗
- b. Speedcoding
- c. ALGOL
- d. APL
- e. C

The correct answer is: Speedcoding

Question 4

Correct Mark 1.00 out of 1.00

What is the first Programming Language?

Select one:

- a. Algol 58
- b. Zuse's Plankalkul ✓
- c. APL
- d. Fortran I

The correct answer is: Zuse's Plankalkul

Question 5

Correct

Mark 1.00 out of 1.00

```
If ( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. APL
- b. Speedcoding
- c. Fortran ✓
- d. ALGOL
- e. C

The correct answer is: Fortran

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Thursday, 26 January 2017, 3:08 PM**State** Finished**Completed on** Thursday, 26 January 2017, 3:16 PM**Time taken** 7 mins 55 secs**Marks** 3.00/5.00**Grade** **60.00** out of 100.00**Question 1**

Correct Mark 1.00 out of 1.00

Why source code usage was developed instead of using object/machine code?

Select one:

- a. Machine code has poor readability
- b. Machine code was hard to modify
- c. Machine code has no indexing
- d. All of them ✓

The correct answer is: All of them

Question 2

Incorrect

Mark 0.00 out of 1.00

Which one is not correct about Zuse's Plankalkul?

Select one:

- a. Has invariants ✗
- b. Has advanced data structures
- c. Implemented in 1972
- d. Designed in 1945

The correct answer is: Implemented in 1972

Question 3

Correct

Mark 1.00 out of 1.00

What is the first AI language?

Select one:

- a. LISP ✓
- b. FORTRAN
- c. JAVA
- d. PYTHON

The correct answer is: LISP

Question 4

Incorrect Mark 0.00 out of 1.00

```
If( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. C
- b. Fortran
- c. APL
- d. ALGOL ✗
- e. Speedcoding

The correct answer is: Fortran

Question 5

Correct Mark 1.00 out of 1.00

_____ first used in Fortran IV.

Select one:

- a. Arrays
- b. Pointers
- c. All
- d. Explicit data type declarations ✓

The correct answer is: Explicit data type declarations

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

Started on Tuesday, 7 February 2017, 11:43 AM

State Finished

Completed on Tuesday, 7 February 2017, 11:53 AM

Time taken 9 mins 49 secs

Marks 7.00/7.00

Grade **100.00** 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. $C = (A + (C + C) * C) * C$
- b. $A = (A+B) * 3$ ✓
- 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 grammar that generates a sentential form for which there are two or more distinct parse trees is said to be _____.

Select one:

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

Your answer is correct.

The correct answer is: ambiguous

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. we cannot say anything about their precedence
- b. + and * have same precedence
- c. + has precedence over *
- 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

Operator precedence can be achieved in _____ grammars.

Select one:

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

Your answer is correct.

The correct answer is: non-ambiguous

Question 5

Correct

Mark 1.00 out of 1.00

What is the lowest level syntactic unit?

Select one:

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

Your answer is correct.

The correct answer is: lexeme

Question 6

Correct

Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Cobol
- b. C++
- c. Python
- d. Java
- e. C ✓

Your answer is correct.

The correct answer is: C

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

Your answer is correct.

The correct answer is: Lisp

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February > Homework 5

Started on Monday, 13 February 2017, 1:48 PM

State Finished

Completed on Monday, 13 February 2017, 1:57 PM

Time taken 9 mins 26 secs

Marks 4.00/5.00

Grade **80.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

A(n) _____ is a device used to describe more of the structure of a programming language than can be described with a context-free- grammar.

Select one:

- a. static semantics
- b. recognizer 
- c. attribute grammar
- d. Extended BNF

Your answer is incorrect.

The correct answer is: attribute grammar

Question 2

Correct Mark 1.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To find inherited attributes
- b. To find intrinsic attributes
- c. To find synthesized attributes
- d. To check ambiguity 

Your answer is correct.

The correct answer is: To check ambiguity

Question 3

Correct

Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 4

Correct

Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 5

Correct

Mark 1.00 out of 1.00

The static semantics of a language deals with the syntax rather than semantics.

Select one:

- True ✓
- False

True

The correct answer is 'True'.

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February > Homework 5

Started on Wednesday, 15 February 2017, 11:46 AM**State** Finished**Completed on** Wednesday, 15 February 2017, 11:55 AM**Time taken** 8 mins 53 secs**Marks** 3.00/5.00**Grade** **60.00** out of 100.00**Question 1** Incorrect Mark 0.00 out of 1.00

Type compatibility can be checked in context-free grammars.

Select one:

 True X False

Attribute grammar can check type compatibility.

The correct answer is 'False'.

Question 2

Incorrect

Mark 0.00 out of 1.00

What does the following attribute grammar mean:

Syntax rule: `<fun_def> → function <fun_name>[1]`

`<fun_body> end <fun_name>[2];`

Predicate: `<fun_name>[1].string == <fun_name>[2].string`

Select one:

- a. Functions cannot be defined without variables
- b. Functions should have two variables
- c. Syntax rule should come before predicate rule when writing in that programming language 
- d. The name on the end of a function must match the functions name

Your answer is incorrect.

The correct answer is: The name on the end of a function must match the functions name

Question 3

Correct Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

- True ✓
 False

The correct answer is 'True'.

Question 4

Correct Mark 1.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To check ambiguity ✓
 b. To find intrinsic attributes
 c. To find inherited attributes
 d. To find synthesized attributes

Your answer is correct.

The correct answer is: To check ambiguity

Question 5

Correct

Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

Select one:

- True ✓
- False

The correct answer is 'True'.

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February > Homework 5

Started on Wednesday, 15 February 2017, 11:55 AM

State Finished

Completed on Wednesday, 15 February 2017, 11:59 AM

Time taken 3 mins 21 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00

Question 1

Correct

Mark 1.00 out of 1.00

A(n) _____ is a device used to describe more of the structure of a programming language than can be described with a context-free- grammar.

Select one:

- a. Extended BNF
- b. attribute grammar ✓
- c. static semantics
- d. recognizer

Your answer is correct.

The correct answer is: attribute grammar

Question 2

Correct

Mark 1.00 out of 1.00

What does the following attribute grammar mean:

Syntax rule: `<fun_def> → function <fun_name>[1]`

`<fun_body> end <fun_name>[2];`

Predicate: `<fun_name>[1].string == <fun_name>[2].string`

Select one:

- a. Functions should have two variables
- b. The name on the end of a function must match the functions name ✓
- c. Syntax rule should come before predicate rule when writing in that programming language
- d. Functions cannot be defined without variables

Your answer is correct.

The correct answer is: The name on the end of a function must match the functions name

Question 3

Correct

Mark 1.00 out of 1.00

The static semantics of a language deals with the syntax rather than semantics.

Select one:

- True ✓
- False

True

The correct answer is 'True'.

Question 4

Correct

Mark 1.00 out of 1.00

Type compatibility can be checked in context-free grammars.

Select one:

- True
- False ✓

Attribute grammar can check type compatibility.

The correct answer is 'False'.

Question 5

Correct

Mark 1.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To check ambiguity ✓
- b. To find inherited attributes
- c. To find intrinsic attributes
- d. To find synthesized attributes

Your answer is correct.

The correct answer is: To check ambiguity

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[Medina Colic](#)

Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 20 February - 26 February > Homework 6 (Slides: Ch4 - Part 1)

Started on Wednesday, 22 February 2017, 1:09 PM**State** Finished**Completed on** Wednesday, 22 February 2017, 1:14 PM**Time taken** 4 mins 37 secs**Marks** 4.00/4.00**Grade** 100.00 out of 100.00**Question 1**

Correct Mark 1.00 out of 1.00

A lexical analyzer is a pattern matcher.

Select one:

 True ✓ False

The correct answer is 'True'.

Question 2

Correct

Mark 1.00 out of 1.00

There are three reasons why lexical analysis is separated from syntax analysis.

Which one of the following is not one of them?

Select one:

- a. Efficiency
- b. Portability
- c. Simplicity
- d. Cost ✓

Your answer is correct.

The correct answer is: Cost

Question 3

Correct

Mark 1.00 out of 1.00

A top-down parser builds a parse tree in _____.

Select one:

- a. preorder ✓
- b. inorder
- c. no order
- d. postorder

Your answer is correct.

The correct answer is: preorder

Question 4

Correct Mark 1.00 out of 1.00

Syntax analysis is often called parsing.

Select one:

- True ✓
- False

The correct answer is 'True'.

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**Geraldo Braho**

Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 20 February - 26 February > Homework 6 (Slides: Ch4 - Part 1)

Started on Wednesday, 22 February 2017, 4:15 PM**State** Finished**Completed on** Wednesday, 22 February 2017, 4:19 PM**Time taken** 3 mins 50 secs**Marks** 4.00/4.00**Grade** **100.00** out of 100.00**Question 1**

Correct Mark 1.00 out of 1.00

A lexical analyzer is a pattern matcher.

Select one:

 True ✓ False

The correct answer is 'True'.

Question 2

Correct

Mark 1.00 out of 1.00

Parsing algorithms that work for any unambiguous grammar are complicated and inefficient. The complexity of those algorithms is _____.

Select one:

- a. $O(N^3)$ ✓
- b. $O(N)$
- c. $O(\log N)$
- d. $O(N^2)$

Your answer is correct.

The correct answer is: $O(N^3)$

Question 3

Correct

Mark 1.00 out of 1.00

A recursive-descent parser is a coded version of a syntax analyzer based directly on the BNF description of the syntax of language.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 4

Correct

Mark 1.00 out of 1.00

Syntax analysis is often called parsing.

Select one:

- True ✓
- False

The correct answer is 'True'.

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Wednesday, 18 January 2017, 10:57 PM

State Finished

Completed on Wednesday, 18 January 2017, 11:01 PM

Time taken 4 mins 29 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00

Question 1

Correct

Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Python
- b. Cobol
- c. C++
- d. Java
- e. C ✓

Your answer is correct.

The correct answer is: C

Question 2

Correct

Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 3

Correct

Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Cobol ✓
- b. AWK
- c. Fortran
- d. Pascal
- e. Algol

Your answer is correct.

The correct answer is: Cobol

Question 4

Correct

Mark 1.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Age ✓
- b. Readability
- c. Cost
- d. Reliability
- e. Writability

Your answer is correct.

The correct answer is: Age

Question 5

Correct

Mark 1.00 out of 1.00

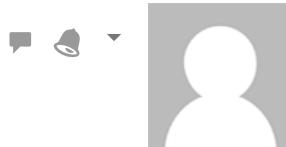
What is the legendary programming language that is especially used for AI?

Select one:

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

Your answer is correct.

The correct answer is: Lisp



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Sunday, 22 January 2017, 9:54 AM

State Finished

Completed on Sunday, 22 January 2017, 9:58 AM

Time taken 3 mins 58 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

Please match the steps for Hybrid Implementation process.

- | | | | |
|--------|-----------------------------|---|---|
| Step 3 | Syntax Analyzer | ▼ | ✓ |
| Step 4 | Intermediate Code Generator | ▼ | ✓ |
| Step 6 | Result | ▼ | ✓ |
| Step 1 | Source Program | ▼ | ✓ |
| Step 2 | Lexical Analyzer | ▼ | ✓ |
| Step 5 | Interpreter | ▼ | ✓ |

Your answer is correct.

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

Question 2

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 3

Correct Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Lisp

Question 4

Correct Mark 1.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. JAVA
- b. FORTRAN
- c. ALGOL ✓
- d. Python
- e. LISP

Your answer is correct.

The correct answer is: ALGOL

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Thursday, 26 January 2017, 3:41 PM**State** Finished**Completed on** Thursday, 26 January 2017, 3:45 PM**Time taken** 4 mins 1 sec**Marks** 4.00/5.00**Grade** **80.00** out of 100.00

Question 1

Correct

Mark 1.00 out of 1.00

```
If( a > b )
```

```
    print "Yes"
```

This logic had been implemented in which programming language first?
(conditional branching)

Select one:

- a. Fortran
- b. C
- c. Speedcoding ✓
- d. APL
- e. ALGOL

The correct answer is: Speedcoding

Question 2

Incorrect

Mark 0.00 out of 1.00

What is the first AI language?

Select one:

- a. FORTRAN ✗
- b. LISP
- c. JAVA
- d. PYTHON

The correct answer is: LISP

Question 3

Correct

Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Fortran ✓
- b. Algol
- c. Java
- d. Smalltalk
- e. C

The correct answer is: Fortran

Question 4

Correct

Mark 1.00 out of 1.00

_____ first used in Fortran IV.

Select one:

- a. All
- b. Explicit data type declarations ✓
- c. Pointers
- d. Arrays

The correct answer is: Explicit data type declarations

Question 5

Correct

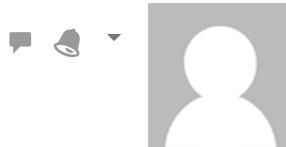
Mark 1.00 out of 1.00

Why source code usage was developed instead of using object/machine code?

Select one:

- a. Machine code was hard to modify
- b. All of them ✓
- c. Machine code has no indexing
- d. Machine code has poor readability

The correct answer is: All of them



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Friday, 27 January 2017, 1:44 PM

State Finished

Completed on Friday, 27 January 2017, 1:52 PM

Time taken 8 mins 6 secs

Marks 3.00/5.00

Grade **60.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

```
If ( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. C 
- b. ALGOL
- c. APL
- d. Speedcoding
- e. Fortran

The correct answer is: Fortran

Question 2

Correct Mark 1.00 out of 1.00

What is the first AI language?

Select one:

- a. PYTHON
- b. LISP 
- c. JAVA
- d. FORTRAN

The correct answer is: LISP

Question 3

Incorrect Mark 0.00 out of 1.00

```
If ( a > b )  
    print "Yes"
```

This logic had been implemented in which programming language first? (conditional branching)

Select one:

- a. APL
- b. Speedcoding
- c. ALGOL
- d. Fortran
- e. C 

The correct answer is: Speedcoding

Question 4

Correct Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Algol
- b. C
- c. Fortran 
- d. Java
- e. Smalltalk

The correct answer is: Fortran

<http://www.na.edu>

E-mail: moodle@na.edu



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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Thursday, 26 January 2017, 3:22 PM**State** Finished**Completed on** Thursday, 26 January 2017, 3:32 PM**Time taken** 9 mins 55 secs**Marks** 3.00/5.00**Grade** **60.00** out of 100.00**Question 1**

Correct Mark 1.00 out of 1.00

Why source code usage was developed instead of using object/machine code?

Select one:

- a. Machine code has no indexing
- b. All of them ✓
- c. Machine code has poor readability
- d. Machine code was hard to modify

The correct answer is: All of them

Question 2

Correct

Mark 1.00 out of 1.00

Which one is not correct about Zuse's Plankalkul?

Select one:

- a. Implemented in 1972 ✓
- b. Has advanced data structures
- c. Has invariants
- d. Designed in 1945

The correct answer is: Implemented in 1972

Question 3

Correct

Mark 1.00 out of 1.00

What is the first Programming Language?

Select one:

- a. Algol 58
- b. Zuse's Plankalkul ✓
- c. Fortran I
- d. APL

The correct answer is: Zuse's Plankalkul

Question 4

Incorrect Mark 0.00 out of 1.00

_____ first used in Fortran IV.

Select one:

- a. Explicit data type declarations
- b. Pointers
- c. All 
- d. Arrays

The correct answer is: Explicit data type declarations

Question 5

Incorrect Mark 0.00 out of 1.00

```
If ( a > b )  
    print "Yes"  
else  
    print "No"
```

This logic had been implemented in which programming language first?

Select one:

- a. ALGOL
- b. Speedcoding 
- c. C
- d. APL
- e. Fortran

The correct answer is: Fortran

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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 30 January - 5 February > Homework 3

Started on Sunday, 5 February 2017, 4:39 PM**State** Finished**Completed on** Sunday, 5 February 2017, 4:45 PM**Time taken** 6 mins 24 secs**Marks** 5.00/5.00**Grade** **100.00** out of 100.00**Question 1**

Correct Mark 1.00 out of 1.00

_____ designed for teaching structured programming.

Select one:

- a. Snobol
- b. Pascal ✓
- c. C
- d. Ada
- e. Fortran

The correct answer is: Pascal

Question 2

Correct

Mark 1.00 out of 1.00

_____ is non-procedural and based on formal logic.

Select one:

- a. Prolog ✓
- b. C
- c. Algol
- d. Ada
- e. Lisp

The correct answer is: Prolog

Question 3

Correct

Mark 1.00 out of 1.00

Which programming language specifically had the following contributions?

- First unit-level concurrency
- First exception handling
- Switch-selectable recursion
- First pointer data type
- First array cross sections

Select one:

- a. COBOL
- b. BASIC
- c. PL/I ✓
- d. ALGOL

The correct answer is: PL/I

Question 4

Correct

Mark 1.00 out of 1.00

What are the common characteristics of APL and SNOBOL?

Select one:

- a. Object oriented
- b. Static typing and static storage
- c. Orthogonal Design
- d. Dynamic typing and dynamic storage ✓

The correct answer is: Dynamic typing and dynamic storage

Question 5

Correct

Mark 1.00 out of 1.00

_____ is designed for system programming.

Select one:

- a. Fortran
- b. Java
- c. C ✓
- d. Pascal



The correct answer is: C

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

Started on Saturday, 11 February 2017, 1:08 AM

State Finished

Completed on Saturday, 11 February 2017, 1:17 AM

Time taken 8 mins 51 secs

Marks 6.00/7.00

Grade **85.71** out of 100.00

Question 1 Correct Mark 1.00 out of 1.00

What is the lowest level syntactic unit?

Select one:

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

Your answer is correct.

The correct answer is: lexeme

Question 2

Correct

Mark 1.00 out of 1.00

The sentences of the language are generated through a sequence of applications of the rules, beginning with a special nonterminal of the grammar called the start symbol. This sequence of rule applications is called a derivation.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 3

Correct

Mark 1.00 out of 1.00

The following grammar is ambiguous:

$$\begin{aligned} & \langle S \rangle \rightarrow \langle A \rangle \\ & \langle A \rangle \rightarrow \langle A \rangle + \langle A \rangle \mid \langle \text{id} \rangle \\ & \langle \text{id} \rangle \rightarrow a \mid b \mid c \end{aligned}$$

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 4

Incorrect Mark 0.00 out of 1.00

Operator precedence can be achieved in _____ grammars.

Select one:

- a. BNF 
- b. token
- c. non-ambiguous
- d. ambiguous

Your answer is incorrect.

The correct answer is: non-ambiguous

Question 5

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. flexible
- b. ambiguous 
- c. unambiguous
- d. readable

Your answer is correct.

The correct answer is: 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 increase our capacity to use different constructs
- c. To be able to select languages more effectively
- d. All of them ✓

Your answer is correct.

The correct answer is: All of them

Question 7

Correct

Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. C ✓
- b. Cobol
- c. Java
- d. C++
- e. Python

Your answer is correct.

The correct answer is: C

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

Started on Saturday, 11 February 2017, 1:18 AM

State Finished

Completed on Saturday, 11 February 2017, 1:22 AM

Time taken 4 mins 50 secs

Marks 5.00/7.00

Grade **71.43** out of 100.00

Question 1

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

Your answer is correct.

The correct answer is: * has precedence over +

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

Incorrect Mark 0.00 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. $A = (A+B) * C$
- c. $A = (B+B) * C$
- d. $C = (A+ (C + C)) * C$ X

Your answer is incorrect.

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

Question 4

Correct

Mark 1.00 out of 1.00

What is the lowest level syntactic unit?

Select one:

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

Your answer is correct.

The correct answer is: lexeme

Question 5

Correct

Mark 1.00 out of 1.00

Operator precedence can be achieved in _____ grammars.

Select one:

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

Your answer is correct.

The correct answer is: non-ambiguous

Question 6

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. Pascal
- c. Algol
- d. Fortran
- e. Lisp ✓

Your answer is correct.

The correct answer is: Lisp

Question 7

Incorrect Mark 0.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. ALGOL
- b. LISP X
- c. FORTRAN
- d. JAVA
- e. Python

Your answer is incorrect.

The correct answer is: ALGOL

<http://www.na.edu>

E-mail: moodle@na.edu



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

Started on Saturday, 11 February 2017, 1:23 AM**State** Finished**Completed on** Saturday, 11 February 2017, 1:32 AM**Time taken** 8 mins 42 secs**Marks** 7.00/7.00**Grade** **100.00** out of 100.00**Question 1**

Correct Mark 1.00 out of 1.00

The sentences of the language are generated through a sequence of applications of the rules, beginning with a special nonterminal of the grammar called the start symbol. This sequence of rule applications is called a derivation.

Select one:

- True ✓
 False

The correct answer is 'True'.

Question 2

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. $A = (A+B) * 3 \checkmark$
- 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 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. + has precedence over *
- c. + and * have same precedence
- d. we cannot say anything about their precedence

Your answer is correct.

The correct answer is: * has precedence over +

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

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

Select one:

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

Your answer is correct.

The correct answer is: ambiguous

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

Your answer is correct.

The correct answer is: Fortran

Question 7

Correct

Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

- True ✓
- False

The correct answer is 'True'.

<http://www.na.edu>

E-mail: moodle@na.edu



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**Geraldo Braho**

Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February > Homework 5

Started on Wednesday, 15 February 2017, 11:41 PM**State** Finished**Completed on** Wednesday, 15 February 2017, 11:43 PM**Time taken** 2 mins 12 secs**Marks** 5.00/5.00**Grade** **100.00** out of 100.00**Question 1**

Correct Mark 1.00 out of 1.00

Type compatibility can be checked in context-free grammars.

Select one:

- True
- False ✓

Attribute grammar can check type compatibility.

The correct answer is 'False'.

Question 2

Correct

Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 3

Correct

Mark 1.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To find inherited attributes
- b. To find intrinsic attributes
- c. To check ambiguity ✓
- d. To find synthesized attributes

Your answer is correct.

The correct answer is: To check ambiguity

Question 4

Correct

Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 5

Correct

Mark 1.00 out of 1.00

A(n) _____ is a device used to describe more of the structure of a programming language than can be described with a context-free- grammar.

Select one:

- a. Extended BNF
- b. static semantics
- c. recognizer
- d. attribute grammar ✓

Your answer is correct.

The correct answer is: attribute grammar



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INSPIRATION INNOVATION GLOBAL COMPETENCE



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February > Homework 5

Started on Thursday, 16 February 2017, 4:14 PM

State Finished

Completed on Thursday, 16 February 2017, 4:20 PM

Time taken 5 mins 33 secs

Marks 2.00/5.00

Grade **40.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To find inherited attributes
- b. To find intrinsic attributes
- c. To find synthesized attributes 
- d. To check ambiguity

Your answer is incorrect.

The correct answer is: To check ambiguity

Question 2

Correct Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 3

Incorrect Mark 0.00 out of 1.00

What does the following attribute grammar mean:

Syntax rule: `<fun_def> → function <fun_name>[1]`

`<fun_body> end <fun_name>[2];`

Predicate: `<fun_name>[1].string == <fun_name>[2].string`

Select one:

- a. The name on the end of a function must match the functions name
- b. Functions cannot be defined without variables
- c. Syntax rule should come before predicate rule when writing in that programming language
X
- d. Functions should have two variables

Your answer is incorrect.

The correct answer is: The name on the end of a function must match the functions name

Question 4

Incorrect Mark 0.00 out of 1.00

Type compatibility can be checked in context-free grammars.

Select one:

- True X
- False

Attribute grammar can check type compatibility.

The correct answer is 'False'.

Question 5

Correct Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

- True ✓
- False

The correct answer is 'True'.



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February
> Homework 5

Started on Thursday, 16 February 2017, 4:29 PM

State Finished

Completed on Thursday, 16 February 2017, 4:31 PM

Time taken 2 mins 9 secs

Marks 5.00/5.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

What does the following attribute grammar mean:

Syntax rule: $\langle \text{fun_def} \rangle \rightarrow \text{function } \langle \text{fun_name} \rangle [1]$

$\langle \text{fun_body} \rangle \text{ end } \langle \text{fun_name} \rangle [2];$

Predicate: $\langle \text{fun_name} \rangle [1].\text{string} == \langle \text{fun_name} \rangle [2].\text{string}$

Select one:

- a. Syntax rule should come before predicate rule when writing in that programming language
- b. Functions should have two variables
- c. The name on the end of a function must match the functions name ✓
- d. Functions cannot be defined without variables

Your answer is correct.

The correct answer is: The name on the end of a function must match the functions name

Question 2

Correct Mark 1.00 out of 1.00

For which one of the following we do not need attribute grammars?

Select one:

- a. To find inherited attributes
- b. To check ambiguity ✓
- c. To find synthesized attributes
- d. To find intrinsic attributes

Your answer is correct.

The correct answer is: To check ambiguity

Question 3

Correct Mark 1.00 out of 1.00

A(n) _____ is a device used to describe more of the structure of a programming language than can be described with a context-free- grammar.

Select one:

- a. attribute grammar ✓
- b. Extended BNF
- c. static semantics
- d. recognizer

Your answer is correct.

The correct answer is: attribute grammar

Question 4

Correct Mark 1.00 out of 1.00

The static semantics of a language deals with the syntax rather than semantics.

Select one:

- True ✓
- False

True

The correct answer is 'True'.

Question 5

Correct Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

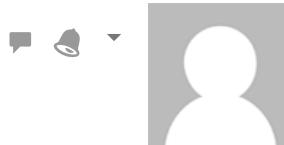
Select one:

- True ✓
- False

The correct answer is 'True'.



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Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 13 February - 19 February
> Homework 5

Started on Thursday, 16 February 2017, 4:21 PM

State Finished

Completed on Thursday, 16 February 2017, 4:28 PM

Time taken 6 mins 48 secs

Marks 4.00/5.00

Grade 80.00 out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

A(n) _____ is a device used to describe more of the structure of a programming language than can be described with a context-free- grammar.

Select one:

- a. recognizer
- b. attribute grammar ✓
- c. static semantics
- d. Extended BNF

Your answer is correct.

The correct answer is: attribute grammar

Question 2

Incorrect Mark 0.00 out of 1.00

The static semantics of a language deals with the syntax rather than semantics.

Select one:

- True
- False X

Static semantics is so named because the analysis required to check syntax specifications can be done at compile time.

The correct answer is 'True'.

Question 3

Correct Mark 1.00 out of 1.00

Type compatibility can be checked in context-free grammars.

Select one:

- True
- False ✓

Attribute grammar can check type compatibility.

The correct answer is 'False'.

Question 4

Correct Mark 1.00 out of 1.00

Dynamic semantics deals with the meaning of expressions, statements, and program units.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 5

Correct Mark 1.00 out of 1.00

Operational semantics deals with the effects of running a program on a machine.

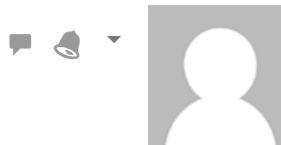
Select one:

- True ✓
- False

The correct answer is 'True'.



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U N I V E R S I T Y**
INSPIRATION INNOVATION GLOBAL COMPETENCE



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 20 February - 26 February
> Homework 6 (Slides: Ch4 - Part 1)

Started on Wednesday, 22 February 2017, 9:10 PM

State Finished

Completed on Wednesday, 22 February 2017, 11:09 PM

Time taken 1 hour 58 mins

Marks 4.00/4.00

Grade **100.00** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

Parsing algorithms that work for any unambiguous grammar are complicated and inefficient. The complexity of those algorithms is _____.

Select one:

- a. $O(N^2)$
- b. $O(N^3)$ ✓
- c. $O(N)$
- d. $O(\log N)$

Your answer is correct.

The correct answer is: $O(N^3)$

Question 2

Correct Mark 1.00 out of 1.00

A recursive-descent parser is a coded version of a syntax analyzer based directly on the BNF description of the syntax of language.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 3

Correct Mark 1.00 out of 1.00

What is the front end of a syntax analyzer?

Select one:

- a. Context-free grammars
- b. Attribute Grammars
- c. Semantic Analyzer
- d. Lexical analyzer ✓

Your answer is correct.

The correct answer is: Lexical analyzer

Question 4

Correct Mark 1.00 out of 1.00

There are three reasons why lexical analysis is separated from syntax analysis. Which one of the following is not one of them?

Select one:

- a. Efficiency
- b. Simplicity
- c. Cost ✓
- d. Portability

Your answer is correct.

The correct answer is: Cost

 <http://www.na.edu>



 E-mail: moodle@na.edu



  **Geraldo Braho** ▾



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 20 February - 26 February > Homework 6 (Slides: Ch4 - Part 1)

Started on Wednesday, 22 February 2017, 4:09 PM

State Finished

Completed on Wednesday, 22 February 2017, 4:14 PM

Time taken 4 mins 39 secs

Marks 3.00/4.00

Grade **75.00** out of 100.00

Question 1

Correct

Mark 1.00 out of 1.00

There are three reasons why lexical analysis is separated from syntax analysis.

Which one of the following is not one of them?

Select one:

- a. Efficiency
- b. Simplicity
- c. Cost ✓
- d. Portability

Your answer is correct.

The correct answer is: Cost

Question 2

Correct

Mark 1.00 out of 1.00

What is the front end of a syntax analyzer?

Select one:

- a. Attribute Grammars
- b. Semantic Analyzer
- c. Lexical analyzer ✓
- d. Context-free grammars

Your answer is correct.

The correct answer is: Lexical analyzer

Question 3

Incorrect Mark 0.00 out of 1.00

A top-down parser builds a parse tree in _____.

Select one:

- a. preorder
- b. no order
- c. inorder ✗
- d. postorder

Your answer is incorrect.

The correct answer is: preorder

Question 4

Correct Mark 1.00 out of 1.00

Syntax analysis is often called parsing.

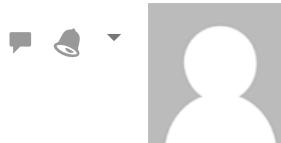
Select one:

- True ✓
- False

The correct answer is 'True'.



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INSPIRATION INNOVATION GLOBAL COMPETENCE



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 20 February - 26 February
> Homework 6 (Slides: Ch4 - Part 1)

Started on Wednesday, 22 February 2017, 9:04 PM

State Finished

Completed on Wednesday, 22 February 2017, 9:10 PM

Time taken 6 mins 4 secs

Marks 3.00/4.00

Grade 75.00 out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

There are three reasons why lexical analysis is separated from syntax analysis. Which one of the following is not one of them?

Select one:

- a. Portability
- b. Simplicity
- c. Efficiency
- d. Cost ✓

Your answer is correct.

The correct answer is: Cost

Question 2

Correct Mark 1.00 out of 1.00

Syntax analysis is often called parsing.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 3

Correct Mark 1.00 out of 1.00

A lexical analyzer is a pattern matcher.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 4

Incorrect Mark 0.00 out of 1.00

A top-down parser builds a parse tree in _____.

Select one:

- a. no order
- b. preorder
- c. inorder ✗
- d. postorder

Your answer is incorrect.

The correct answer is: preorder



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Friday, 20 January 2017, 1:07 PM

State Finished

Completed on Friday, 20 January 2017, 1:16 PM

Time taken 8 mins 50 secs

Marks 4.00/5.00

Grade 80.00 out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

Why should we study programming languages?

Select one:

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

Your answer is correct.

The correct answer is: All of them

Question 2

Incorrect Mark 0.00 out of 1.00

Which language used orthogonality as a primary design criterion?

Select one:

- a. JAVA
- b. FORTRAN
- c. ALGOL
- d. LISP ✗
- e. Python

Your answer is incorrect.

The correct answer is: ALGOL

Question 3

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 4

Correct Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Cobol ✓
- b. Algol
- c. Pascal
- d. AWK
- e. Fortran

Your answer is correct.

The correct answer is: Cobol

Question 5

Correct Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

- True ✓
- False

The correct answer is 'True'.



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INSPIRATION INNOVATION GLOBAL COMPETENCE



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 16 January - 22 January > Homework 1

Started on Friday, 20 January 2017, 12:57 PM

State Finished

Completed on Friday, 20 January 2017, 1:06 PM

Time taken 8 mins 49 secs

Marks 3.17/5.00

Grade **63.33** out of 100.00

Question 1

Correct Mark 1.00 out of 1.00

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

Select one:

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

Your answer is correct.

The correct answer is: Lisp

Question 2

Incorrect Mark 0.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Cost
- b. Age
- c. Writability
- d. Readability X
- e. Reliability

Your answer is incorrect.

The correct answer is: Age

Question 3

Correct Mark 1.00 out of 1.00

In what language is most of UNIX written?

Select one:

- a. Cobol
- b. Java
- c. C ✓
- d. C++
- e. Python

Your answer is correct.

The correct answer is: C

Question 4

Correct Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 5

Partially correct Mark 0.17 out of 1.00

Please match the steps for Hybrid Implementation process.

Step 2	Syntax Analyzer	▼	X
Step 5	Intermediate Code Generator	▼	X
Step 1	Lexical Analyzer	▼	X
Step 6	Result	▼	✓
Step 3	Interpreter	▼	X
Step 4	Source Program	▼	X

Your answer is partially correct.

You have correctly selected 1.

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



Dashboard > My courses > COMP > COMP 3320.Programming Languages.2017SPR.s1 > 23 January - 29 January > Homework 2

Started on Friday, 27 January 2017, 1:39 PM

State Finished

Completed on Friday, 27 January 2017, 1:43 PM

Time taken 4 mins 47 secs

Marks 3.00/5.00

Grade **60.00** out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

Which one is not correct about Zuse's Plankalkul?

Select one:

- a. Has invariants 
- b. Implemented in 1972
- c. Designed in 1945
- d. Has advanced data structures

The correct answer is: Implemented in 1972

Question 2

Incorrect Mark 0.00 out of 1.00

_____ first used in Fortran IV.

Select one:

- a. Arrays
- b. Explicit data type declarations
- c. All ✗
- d. Pointers

The correct answer is: Explicit data type declarations

Question 3

Correct Mark 1.00 out of 1.00

Which programming language was designed for IBM 704 machine that takes advantage of the floating point hardware calculations instead of software calculations.

Select one:

- a. Java
- b. Smalltalk
- c. C
- d. Fortran ✓
- e. Algol

The correct answer is: Fortran

Question 4

Correct Mark 1.00 out of 1.00

Why source code usage was developed instead of using object/machine code?

Select one:

- a. Machine code was hard to modify
- b. Machine code has no indexing
- c. Machine code has poor readability
- d. All of them ✓

The correct answer is: All of them

Question 5

Correct Mark 1.00 out of 1.00

What is the first Programming Language?

Select one:

- a. Fortran I
- b. Zuse's Plankalkul ✓
- c. APL
- d. Algol 58

The correct answer is: Zuse's Plankalkul



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

Started on Monday, 6 February 2017, 8:41 PM

State Finished

Completed on Monday, 6 February 2017, 8:50 PM

Time taken 8 mins 57 secs

Marks 7.00/7.00

Grade **100.00** out of 100.00

Question 1

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. * has precedence over + ✓
- c. we cannot say anything about their precedence
- d. + and * have same precedence

Your answer is correct.

The correct answer is: * has precedence over +

Question 2

Correct Mark 1.00 out of 1.00

What is the lowest level syntactic unit?

Select one:

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

Your answer is correct.

The correct answer is: lexeme

Question 3

Correct Mark 1.00 out of 1.00

The sentences of the language are generated through a sequence of applications of the rules, beginning with a special nonterminal of the grammar called the start symbol. This sequence of rule applications is called a derivation.

Select one:

- True ✓
- False

The correct answer is 'True'.

Question 4

Correct Mark 1.00 out of 1.00

Operator precedence can be achieved in _____ grammars.

Select one:

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

Your answer is correct.

The correct answer is: non-ambiguous

Question 5

Correct Mark 1.00 out of 1.00

The following grammar is ambiguous:

```
<S> → <A>  
<A> → <A> + <A> | <id>  
<id> → a | b | c
```

Select one:

- True ✓
- False

The correct answer is 'True'.

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

Your answer is correct.

The correct answer is: Fortran

Question 7

Correct Mark 1.00 out of 1.00

JIT (Just-in-Time) compilers are widely used for Java programs.

Select one:

- True ✓
- False

The correct answer is 'True'.



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

Started on Monday, 6 February 2017, 8:30 PM

State Finished

Completed on Monday, 6 February 2017, 8:39 PM

Time taken 8 mins 37 secs

Marks 5.00/7.00

Grade 71.43 out of 100.00

Question 1

Incorrect Mark 0.00 out of 1.00

Operator precedence can be achieved in _____ grammars.

Select one:

- a. non-ambiguous
- b. BNF
- c. token
- d. ambiguous 

Your answer is incorrect.

The correct answer is: non-ambiguous

Question 2

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

Your answer is correct.

The correct answer is: * has precedence over +

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

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

Select one:

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

Your answer is correct.

The correct answer is: ambiguous

Question 6

Incorrect Mark 0.00 out of 1.00

Which one of the following is not a criterion for a programming language evaluation?

Select one:

- a. Age
- b. Cost
- c. Readability ✗
- d. Writability
- e. Reliability

Your answer is incorrect.

The correct answer is: Age

Question 7

Correct Mark 1.00 out of 1.00

What is the legendary programming language that is especially used for business purposes?

Select one:

- a. Fortran
- b. Algol
- c. Pascal
- d. Cobol ✓
- e. AWK

Your answer is correct.

The correct answer is: Cobol



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

Started on Monday, 6 February 2017, 8:18 PM

State Finished

Completed on Monday, 6 February 2017, 8:28 PM

Time taken 10 mins

Marks 4.00/7.00

Grade 57.14 out of 100.00

Question 1

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 2

Incorrect Mark 0.00 out of 1.00

The sentences of the language are generated through a sequence of applications of the rules, beginning with a special nonterminal of the grammar called the start symbol. This sequence of rule applications is called a derivation.

Select one:

- True
- False X

The correct answer is 'True'.

Question 3

Incorrect Mark 0.00 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. readable
- b. flexible X
- c. ambiguous
- d. unambiguous

Your answer is incorrect.

The correct answer is: ambiguous

Question 4

Incorrect Mark 0.00 out of 1.00

The following grammar cannot produce?

```
<assign> → <id> = <expr>
<id> → A | B | C
<expr> → <expr> + <term>
| <term>
<term> → <term> * <factor>
| <factor>
<factor> → ( <expr> )
| <id>
```

Select one:

- a. $A = (B+B)^* C$
- b. $A = (A+B)^* C \text{ X}$
- c. $C = (A+(C+C))^* C$
- d. $A = (A+B)^* 3$

Your answer is incorrect.

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

Question 5

Correct Mark 1.00 out of 1.00

What is the lowest level syntactic unit?

Select one:

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

Your answer is correct.

The correct answer is: lexeme

Question 6

Correct Mark 1.00 out of 1.00

Please match the steps for Hybrid Implementation process.

Step 5	Interpreter	▼	✓
Step 3	Syntax Analyzer	▼	✓
Step 1	Source Program	▼	✓
Step 2	Lexical Analyzer	▼	✓
Step 6	Result	▼	✓
Step 4	Intermediate Code Generator	▼	✓

Your answer is correct.

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

Question 7

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 increase our capacity to use different constructs
- c. All of them ✓
- d. To be able to select languages more effectively

Your answer is correct.

The correct answer is: All of them