

Code No: R05310505

R05**Set No. 2**

III B.Tech I Semester Examinations, November 2010
PRINCIPLES OF PROGRAMMING LANGUAGES
Computer Science And Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) What are mixed-mode expressions? Explain coercion in expressions.
 (b) Explain with an example Ada "CASE" statement.
 (c) What do you mean by unconditional branching and what are the problems with unconditional branching. [5+5+6]
2. (a) Describe the fundamental differences between C#'s structs and its classes.
 (b) Why does java not have destructors. Give reasons.
 (c) What is C++ name space and what is its purpose? [6+6+4]
3. (a) What is the difference between checked and unchecked exception in java?
 (b) How can exceptions explicitly raised in C++?
 (c) How is user defined exception defined in ADA? [4+6+6]
4. What is Aliasing? Discuss the issues involved in aliasing parameters in procedures? [16]
5. (a) Prove that the following program is correct provide validations.

```

{ n > 0 }
count = n;
sum = 0;
while count <= 0 do
sum = sum + count;
count = count - 1;
end
{ sum = 1 + 2 + ..... + n }

```


 (b) Write CFG for the language consisting of strings that have n copies of the letter **a** followed by the same number of copies of the letter **b**, where n > 0. Draw the parse trees for the sentences **aabb** and **aaaabbbb**, as derived from the grammar. [8+8]
6. (a) What do you mean by a general purpose language. Is C a general purpose language?
 (b) Explain about von Neumann computer architecture.
 (c) What are the three general methods of implementing a programming language? [4+4+8]

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7. Explain pointers, reference types, design issues of pointers, operations on pointers, pointer problems and implementation of pointer and reference types. [16]
8. Explain various operations that can be performed on atoms and lists in LISP. Give examples. [16]

FIRSTRANKER

Code No: R05310505

R05**Set No. 4**

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PRINCIPLES OF PROGRAMMING LANGUAGES
Computer Science And Engineering

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
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1. (a) Describe the fundamental differences between C#'s structs and its classes.
 (b) Why does java not have destructors. Give reasons.
 (c) What is C++ name space and what is its purpose? [6+6+4]
2. What is Aliasing? Discuss the issues involved in aliasing parameters in procedures? [16]
3. (a) Prove that the following program is correct provide validations.

```

{n > 0}
count=n;
sum=0;
while count <> 0 do
sum=sum+count;
count=count-1;
end
{sum = 1 + 2.....n}

```


 (b) Write CFG for the language consisting of strings that have n copies of the letter **a** followed by the same number of copies of the letter **b**, where n > 0. Draw the parse trees for the sentences **aabb** and **aaaabbbb**, as derived from the grammar. [8+8]
4. Explain various operations that can be performed on atoms and lists in LISP. Give examples. [16]
5. (a) What are mixed-mode expressions? Explain coercion in expressions.
 (b) Explain with an example Ada "CASE" statement.
 (c) What do you mean by unconditional branching and what are the problems with unconditional branching. [5+5+6]
6. Explain pointers, reference types, design issues of pointers, operations on pointers, pointer problems and implementation of pointer and reference types. [16]
7. (a) What is the difference between checked and unchecked exception in java?
 (b) How can exceptions explicitly raised in C++?
 (c) How is user defined exception defined in ADA? [4+6+6]

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Set No. 4

8. (a) What do you mean by a general purpose language. Is C a general purpose language?
- (b) Explain about von Neumann computer architecture.
- (c) What are the three general methods of implementing a programming language? [4+4+8]

FIRSTRANKER

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R05**Set No. 1**

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PRINCIPLES OF PROGRAMMING LANGUAGES
Computer Science And Engineering

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Prove that the following program is correct provide validations.

```

{n > 0}
count=n;
sum=0;
while count <> 0 do
sum=sum+count;
count=count-1;
end
{sum = 1 + 2.....n}

```
- (b) Write CFG for the language consisting of strings that have n copies of the letter **a** followed by the same number of copies of the letter **b**, where n > 0. Draw the parse trees for the sentences **aabb** and **aaaabbbb**, as derived from the grammar. [8+8]
2. (a) What do you mean by a general purpose language. Is C a general purpose language?
- (b) Explain about von Neumann computer architecture.
- (c) What are the three general methods of implementing a programming language? [4+4+8]
3. Explain various operations that can be performed on atoms and lists in LISP. Give examples. [16]
4. (a) What is the difference between checked and unchecked exception in java?
- (b) How can exceptions explicitly raised in C++?
- (c) How is user defined exception defined in ADA? [4+6+6]
5. Explain pointers, reference types, design issues of pointers, operations on pointers, pointer problems and implementation of pointer and reference types. [16]
6. What is Aliasing? Discuss the issues involved in aliasing parameters in procedures? [16]
7. (a) What are mixed-mode expressions? Explain coercion in expressions.
- (b) Explain with an example Ada "CASE" statement.
- (c) What do you mean by unconditional branching and what are the problems with unconditional branching. [5+5+6]

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R05

Set No. 1

8. (a) Describe the fundamental differences between C#'s structs and its classes.
(b) Why does java not have destructors. Give reasons.
(c) What is C++ name space and what is its purpose? [6+6+4]

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R05**Set No. 3**

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Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. Explain various operations that can be performed on atoms and lists in LISP. Give examples. [16]
2. (a) Describe the fundamental differences between C#'s structs and its classes.
 (b) Why does java not have destructors. Give reasons.
 (c) What is C++ name space and what is its purpose? [6+6+4]
3. (a) What do you mean by a general purpose language. Is C a general purpose language?
 (b) Explain about von Neumann computer architecture.
 (c) What are the three general methods of implementing a programming language? [4+4+8]
4. What is Aliasing? Discuss the issues involved in aliasing parameters in procedures? [16]
5. (a) What are mixed-mode expressions? Explain coercion in expressions.
 (b) Explain with an example Ada "CASE" statement.
 (c) What do you mean by unconditional branching and what are the problems with unconditional branching. [5+5+6]
6. Explain pointers, reference types, design issues of pointers, operations on pointers, pointer problems and implementation of pointer and reference types. [16]
7. (a) Prove that the following program is correct provide validations.

```

{ $n > 0$ }
count=n;
sum=0;
while count <> 0 do
sum=sum+count;
count=count-1;
end
{ $sum = 1 + 2 + \dots + n$ }

```


 (b) Write CFG for the language consisting of strings that have n copies of the letter **a** followed by the same number of copies of the letter **b**, where $n > 0$. Draw the parse trees for the sentences **aabb** and **aaaabbbb**, as derived from the grammar. [8+8]

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R05

Set No. 3

8. (a) What is the difference between checked and unchecked exception in java?
(b) How can exceptions explicitly raised in C++?
(c) How is user defined exception defined in ADA? [4+6+6]

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