Code No: NR/RR320504

NR/RR

Set No. 2

III B.Tech II Semester Examinations,December 2010
LANGUAGE PROCESSORS
Common to Information Technology, Computer Science And Engineering

Time: 3 hours   Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks
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1. (a) Write an algorithm to compute reaching definition informatory for a flow graph. [8]

   (b) Explain the working of the above algorithm using a suitable example. [8]

2. (a) Construct predicitive parse table for the following grammar.
      E → E + T|T
      T → TF|F
      F → F * |A|B [10]

   (b) What are the limitations of recursive descent parser. [6]

3. Construct cannonical LR parse table for the following grammer.
   S → L =R
   S → L
   L →* R
   R → L [16]

4. Design the algorithm for the PASS II of an assembler. Explain the Data structure used in PASS II [16]

5. (a) Translate the expression -(a+b)*(c+d)+(a+b+c) into quadruple, triple and indirect triple. [9]

   (b) Explain in detail the optimization tecnique "Strength Reduction". [7]

6. (a) Discuss briefly about overloading of function and operator with suitable example. [10]

   (b) What is polymorphic function. Discuss briefly. [6]

7. (a) Explain how the scope information is represented in the symbol table for a block structured language. [8]

   (b) Suppose P(x,y) is a 'C' procedure, and it is called by P(A+B,C). Show the intermediate code generated for the call and return. Make arbitrary assumptions about the locations of A, B and C in the activation record of the calling procedure. [8]

8. (a) What is the role of lexical analyzer. [6]

   (b) Construct an NFA for the regular expression R=(a+b)* abb convert it in to an equivalent DFA. [10]

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Code No: NR/RR320504

NR/RR

Set No. 4

III B.Tech II Semester Examinations,December 2010
LANGUAGE PROCESSORS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours   Max Marks: 80
Answer any FIVE Questions
All Questions carry equal marks
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1. Design the algorithm for the PASS II of an assembler. Explain the Data structure used in PASS II   [16]

2. (a) Explain how the scope information is represented in the symbol table for a block structured language.   [8]

   (b) Suppose P(x,y) is a 'C' procedure, and it is called by P(A+B,C). Show the intermediate code generated for the call and return. Make arbitrary assumptions about the locations of A, B and C in the activation record of the calling procedure.   [8]

3. Construct cannonical LR parse table for the following grammer.
   S → L =R
   S → L
   L →* R
   R → L   [16]

4. (a) Translate the expression -(a+b)*(c+d)+(a+b+c) into quadruple, triple and indirect triple.   [9]

   (b) Explain in detail the optimization tecnique "Strength Reduction".   [7]

5. (a) What is the role of lexical analyzer.   [6]

   (b) Construct an NFA for the regular expression R=(a+b)* abb convert it in to an equivalent DFA.   [10]

6. (a) Construct predicitive parse table for the following grammar.
   E → E + T|T
   T → TF|F
   F → F ∗ |A|B   [10]

   (b) What are the limitations of recursive descent parser.   [6]

7. (a) Discuss briefly about overloading of function and operator with suitable example.   [10]

   (b) What is polymorphic function. Discuss briefly.   [6]

8. (a) Write an algorithm to compute reaching definition informatory for a flow graph.   [8]

   (b) Explain the working of the above algorithm using a suitable example. [8]

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Code No: NR/RR320504 **NR/RR** **Set No. 1**

III B.Tech II Semester Examinations,December 2010
LANGUAGE PROCESSORS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours   Max Marks: 80
Answer any FIVE Questions
All Questions carry equal marks
⋆ ⋆ ⋆ ⋆ ⋆

1. (a) Discuss briefly about overloading of function and operator with suitable example. [10]

   (b) What is polymorphic function. Discuss briefly. [6]

2. (a) Construct predicitive parse table for the following grammar.
   $E \rightarrow E + T | T$
   $T \rightarrow TF | F$
   $F \rightarrow F * | A | B$ [10]

   (b) What are the limitations of recursive descent parser. [6]

3. (a) Explain how the scope information is represented in the symbol table for a block structured language. [8]

   (b) Suppose P(x,y) is a 'C' procedure, and it is called by P(A+B,C). Show the intermediate code generated for the call and return. Make arbitrary assumptions about the locations of A, B and C in the activation record of the calling procedure. [8]

4. (a) What is the role of lexical analyzer. [6]

   (b) Construct an NFA for the regular expression R=(a+b)* abb convert it in to an equivalent DFA. [10]

5. (a) Write an algorithm to compute reaching definition informatory for a flow graph. [8]

   (b) Explain the working of the above algorithm using a suitable example. [8]

6. Construct cannonical LR parse table for the following grammer.
   $S \rightarrow L = R$
   $S \rightarrow L$
   $L \rightarrow^* R$
   $R \rightarrow L$ [16]

7. (a) Translate the expression -(a+b)*(c+d)+(a+b+c) into quadruple, triple and indirect triple. [9]

   (b) Explain in detail the optimization tecnique "Strength Reduction". [7]

8. Design the algorithm for the PASS II of an assembler. Explain the Data structure used in PASS II [16]

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Code No: NR/RR320504

NR/RR

Set No. 3

III B.Tech II Semester Examinations,December 2010
LANGUAGE PROCESSORS
Common to Information Technology, Computer Science And Engineering
Time: 3 hours   Max Marks: 80
Answer any FIVE Questions
All Questions carry equal marks
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1. (a) Discuss briefly about overloading of function and operator with suitable example.   [10]

   (b) What is polymorphic function. Discuss briefly.   [6]

2. (a) Explain how the scope information is represented in the symbol table for a block structured language.   [8]

   (b) Suppose P(x,y) is a 'C' procedure, and it is called by P(A+B,C). Show the intermediate code generated for the call and return. Make arbitrary assumptions about the locations of A, B and C in the activation record of the calling procedure.   [8]

3. Construct cannonical LR parse table for the following grammer.
   S → L =R
   S → L
   L →* R
   R → L   [16]

4. (a) Write an algorithm to compute reaching definition informatory for a flow graph.   [8]

   (b) Explain the working of the above algorithm using a suitable example.   [8]

5. Design the algorithm for the PASS II of an assembler. Explain the Data structure used in PASS II   [16]

6. (a) Translate the expression -(a+b)*(c+d)+(a+b+c) into quadruple, triple and indirect triple.   [9]

   (b) Explain in detail the optimization tecnique "Strength Reduction".   [7]

7. (a) Construct predicitive parse table for the following grammar.
   E → E + T|T
   T → TF|F
   F → F ∗ |A|B   [10]

   (b) What are the limitations of recursive descent parser.   [6]

8. (a) What is the role of lexical analyzer.   [6]

   (b) Construct an NFA for the regular expression R=(a+b)* abb convert it in to an equivalent DFA.   [10]

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