

COMPILER DESIGN (21PC0CS20)

OBJECTIVE-TYPE QUESTIONS

UNIT-I

1. How many parts of a Compiler are there?
 - a) 1
 - b) 2
 - ☒ c) 4
 - d) 8
2. What is the output of Lexical analyzer?
 - a) Parse tree
 - ☒ b) a list of Tokens
 - c) Intermediate code
 - d) Machine code
3. Parser is also known as
 - a) Lexical analysis
 - b) Semantic analysis
 - ☒ c) Syntax analysis
 - d) Code generation
4. A system program that combines the separately compiled modules of a program into a form suitable for execution is?
 - a) Assemblers
 - ☒ b) Linker/loader
 - c) Cross compiler
 - d) Load and Go
5. In Two pass assembler the object code generation is done during the
 - ☒ a) Second pass
 - b) First pass
 - c) Zeroth pass
 - d) Not done by assembler
6. Which one of the following languages over the alphabet $\{0, 1\}$ is described by the regular expression? $(0+1)^*0(0+1)^*0(0+1)^*$
 - ☒ a) strings with the substring 00
 - b) strings with at most two 0's
 - c) strings with at least two 0's
 - d) strings beginning and ending with either 0 or 1
7. What is the Regular Expression Matching Zero or More Specific Characters?
 - a) +
 - b) #
 - c) &
 - ☒ d) *

8. In a compiler the module that checks every character of the source text is called
- a) The code generator
 - b) The code optimizer
 - ☒ c) The lexical analyzer
 - d) The syntax analyzer
9. What is another name for Lexical Analyser
- a) Linear Phase
 - b) Linear Analysis
 - ☒ c) Scanner
 - d) Parser
10. An individual token is called
- ☒ a) Lexeme
 - b) Lex
 - c) attribute
 - d) grammar
11. Which among the following is not a token?
- a) keyword
 - b) identifier
 - ☒ c) header file
 - d) constant
12. What is an Object program?
- a) Program written in machine language
 - b) Program to be translated into machine language
 - c) Translation of high-level language into machine language
 - ☒ d) output
13. When expression $\text{sum} = 3 + 2$ is tokenized then what is the token category of 3?
- ☒ a) Integer Literal
 - b) Assignment operator
 - c) Identifier
 - d) Addition Operator
14. Which grammar defines Lexical Analysis?
- a) Context Sensitive Grammar
 - b) Recursive Grammar
 - c) Context free Grammar
 - ☒ d) Regular Grammar
15. Translator is a
- a) Function
 - ☒ b) Program
 - c) Mapping Process
 - d) Linker
16. Which of the following statement is wrong?
- a) Compiler is translator
 - b) Interpreter gives the output as intermediate code
 - ☒ c) Linker generates absolute machine code
 - d) Some compilers may have assembler programs
17. What is the interface between lexical Analyzer and Syntax Analyzer?

- a) Token
 - b) Source program
 - ☒ c) Stream of Tokens
 - d) input String
18. What is the corresponding meaning of '\$'?
- a) output
 - ☒ b) matches with the end of line as last character
 - c) represent another alternative
 - d) used as escape meta character
19. Which of the expression is not a type of token?
- a) Constant
 - b) Identifier
 - c) Keyword
 - ☒ d) Expression
20. Which of the Following is not a valid token?
- a) Punctuation symbol
 - ☒ b) White space
 - c) Reserved Word
 - d) String literal
21. In a Compiler the module that removes Comments and White spaces is
- ☒ a) lexical analyzer
 - b) Syntax analyzer
 - c) Semantic analyzer
 - d) code optimizer
22. Consider the following 'c' code fragment :total=count+rate*60.How many tokens are there in the given fragment?
- a) 4
 - b) 5
 - ☒ c) 6
 - d) 7
23. In a Compiler ,the module that checks every character of the source text is
- a) syntax analysis
 - ☒ b) lexical analysis
 - c) semantic Analysis
 - d) code generator
24. In programming language tokens are described with
- a) Finite automata
 - b) Regular Expression
 - ☒ c) Regular Grammars
 - d) Regular Languages
25. What is the corresponding meaning of '|'?
- a) output
 - b) mathes with the end of line as last character
 - ☒ c) represent another alternative
 - d) used as escape meta character

26. Which of the tool below combines (static) library routines and incomplete object codes in to executable machine language program?

- a) Assembler
- b) Compiler
- c) Interpreter
- ☒ d) Linker

27. Which class of errors are detected by a scanner that is apart of Compiler?

- ☒ a) Lexical errors
- b) Syntax errors
- c) Semantic errors
- d) Program Errors

28. Which of the following is not a part of the front end Compiler?

- a) Semantic Analysis
- b) Scanner
- ☒ c) Target generation
- d) Parser

29. Which of the Following is not a white space Character?

- a) Blank
- b) Tab
- c) New line
- ☒ d) Error

30. Which of the following is/are used for Scanner generators?

- ☒ a) Lex
- b) Yacc
- c) a.out
- d) out

31. Which of the following is/are tool(s) for generating bottom up parsing in C?

- ☒ a) YACC
- b) BISON
- c) #Bash
- d) JVM

32. Find the odd man out from the following?

- a) Top-down Parsing
- b) Bottom-up Parsing
- c) Dictating
- ☒ d) Scanning

33. How many languages consist in Cross compiler?

- a) 1
- ☒ b) 2
- c) 3
- d) 4

34. Good compiler requires

- ☒ a) less amount of memory
 - b) large amount of memory
 - c) lesssize of string
 - d) empty string
35. The length of string denoted by
- ☒ a) $|S|$
 - b) ∞
 - c) ϵ
 - d) ϕ
36. The empty string can be denoted as
- a) $|S|$
 - b) ∞
 - ☒ c) ϵ
 - d) ϕ
37. The empty set is denoted by
- a) $|S|$
 - b) ∞
 - c) ϵ
 - ☒ d) ϕ
38. Union of two languages L_1 & L_2 is denoted by
- ☒ a) $L_1 \cup L_2$
 - b) $L_1.L_2$
 - c) L^*
 - d) L^+
39. Kleen Closure of language L is denoted by
- ☒ a) L^*
 - b) L^-
 - c) $L/$
 - d) L^+
40. How many sections consist in a Lex program ?
- a) 1
 - b) 4
 - ☒ c) 3
 - d) 5

UNIT-II

41. Generally computations are done from _____ of the tree.
- ☒ a) bottom
 - b) top
 - C) a or b
 - d) parser
42. _____ parser constructs the parse tree from the leaves to the root for the given i/p string.
- ☒ a) bottom-up
 - b) Top-Down
 - c) Parsers

- d. Operator precedence
- 43.._____ is automatic parser generator.
- ☒ a) YACC
 - b) LL(1)
 - c) SLR
 - d) RECURSIVE DESCENT
44. The minimum value of K in LR(K) is _____.
- a). 0
 - ☒ b). 1
 - c). 2.
 - d). 3
45. Users write the programs in _____.
- a. Low-level Language
 - ☒ b. High-Level Language
 - c. Decimal-Format
 - d. Middle-Level Language
46. YACC builds up _____ parsing table.
- a. three dimensional
 - b. four dimensional
 - c. One dimensional
 - ☒ d. two dimensional
47. Does the compiler program translate the whole source code in one step?
- ☒ a. No
 - b. Depends on the Compiler
 - c. Depends on the Program
 - d. Yes
48. Leaf nodes in a parse tree indicate?
- a) sub terminals
 - b) half-terminals
 - c) non-terminals
 - ☒ d) terminals
- 49.._____ is the second section in YACC specification.
- ☒ a. translation rules
 - b. definition
 - c. Routines
 - d. main section
50. Shift reduce parsers are _____ parsers.
- a. Top down
 - ☒ b. Bottom up
 - c. YACC
 - d. LEX
51. The most general phase of structured grammar is?
- ☒ a. Context-sensitive grammar

- b.CFG
 - c. Regular grammar
 - d.REL
- 52.In the bottom up parser, the I/P string is reduced to the starting_____
- (a)terminal
 - ☒ (b)non terminal
 - (c)yield
 - (d) null variable
- 53._____ is the bottom up parser.
- ☒ (a)shift reduce parser
 - (b)predictive parser
 - (c) Brute force parser
 - (d)Recursive Descent Parser
- 54.Precedence function can be represented in _____
- ☒ (a)table
 - (b)structure
 - (c)graph
 - (d)tree
- 55.Multiple defined entries in SLR parsing table indicates that is is not_____
- a.SLR(0)
 - b. LR(0)
 - ☒ c.LALR
 - d. CLR
- 56._____ parser is bottom up and efficient parser
- ☒ (a)LR
 - (b)LALR
 - (c)SLR
 - (d)CLR
- 57.Which of the following parser is a top-down parser?
- a.An LALR parser
 - b.A LR parser
 - c.Operator precedence parser
 - ☒ d.RecursiveDescent Parser
- 58.Which of the following is not a bottom up parser?
- (a)LALR
 - ☒ (b) Predictive parser
 - (c)CLR
 - (d)SLR
- 59.In bottom up parser, shift always_____
- ☒ (a)Pushes a token and also advances the input
 - (b) does pop operation
 - (c) advances the input
 - (d) pushes a token
- 60.YACC is related to_____
- (a) code generation

- (b) semantic analysis
 - (c) lexical analysis
 - ☒ (d) parsing
61. YACC stands for-----
- a. operator
 - b. second
 - c. look ahead
 - ☒ d. yet another compiler compiler
62. LR stands for-----
- a. right to left scanning and right most derivation in reverse
 - b. right to left scanning and right most derivation
 - ☒ c. left to right scanning and right most derivation
 - d. left to right scanning and right most derivation in reverse
63. Which language is accepted by the push-down automata?
- a. Type 0 language
 - ☒ b. Type 1 language
 - c. Type 2 language
 - d. Type 3 language
64. Parsing in compiler design is -----phase
- a. first
 - b. second
 - ☒ c. third
 - d. fourth
65. An operator precedence parser can be constructed for-----grammar
- a. ambiguous
 - b. Lexical
 - c. Un ambiguous grammar
 - ☒ d. both a and c
66. Brute force method of Parsing is _____ parser
- ☒ a) Bottom Up
 - b) Top Down
 - c) Left recursive
 - d) Left factored
67. Which language is accepted by the finite automata?
- a. Type 0 language
 - b. Type 1 language
 - ☒ c. Type 2 language
 - d. Type 3 language
68. Which phenomenon happens when the non-terminal on the left side is repeated as the first symbol on the right side?
- A. Left-most derivation
 - ☒ B. Left recursion
 - C. Left factoring
 - D. Left parsing
69. In which derivation the right-most non-terminal symbol is replaced at each step?

- A. Right look ahead
 - B. B.Right claim
 - ☒ C. C.Rightmost
 - D. D.Right non-terminal
70. What type of conflicts can occur in the shift-reduce parsing?
- A. reduce/reduce
 - B. shift/reduce
 - C. Both shift/reduce and reduce/reduce
 - D. only Shift
71. Which of the following are labeled by operator symbol?
- A. Root
 - B. Interior nodes
 - ☒ C. Leaves
 - D. Nodes
72. Which of the following function is called the canonical collection of LR(0) item.
- a. FIRST
 - b. GOTO
 - ☒ c. COMPUTE
 - d. FOLLOW
73. ACTION part of the table is a two dimensional array indexed by
- a. state and non terminal
 - ☒ b. state and terminal
 - c. syntactic errors
 - d. Logical errors
74. GO TO part of the table is a two dimensional array indexed by
- ☒ a. state and non terminal
 - b. state and input symbol
 - c. syntactic errors
 - d. shift reducing parsing
75. CLR(1) stands for
- a. DFA
 - b. SLR
 - ☒ c. canonical LR(1)
 - d. simple LR(1)
76. SLR stands for
- a. DFA
 - b. Look ahead LR (1)
 - ☒ c. canonical LR(1)
 - d. simple LR
77. LALR(1) stands for
- a. DFA

- b. Look ahead LR (1)
 - c. canonical LR(1)
 - d. ☒ simple LR(1)
78. YACC uses _____ parser approach
- a. ☒ LALR
 - b. CLR
 - c. SLR
 - d. LEX
79. The parsing technique that avoids backtracking is
- (A) Brute force method
 - (B) RDP
 - (C) Predictive parsing
 - (D) ☒ Both (b) and (c)
80. Which of the following option is not a function of the shift-reduce parser?
- A. Reduce
 - B. ☒ Accept
 - C. Go
 - D. Shift

UNIT-III

81. The properties of an entity are called _____.
- a. Semantic Analysis
 - b. Syntax Analyzer
 - c. Grammar Symbol
 - d. ☒ Attributes
82. Which of the following symbol table implementation is based on the property of locality of reference?
- (A) Linear list
 - (B) Self-organizing list
 - (C) Search
 - (D) ☒ Hash table
83. Type checking and runtime environments will be dealt by _____ section of the compiler.
- a. ☒ Semantic Analysis
 - b. Syntax Analyzer
 - c. Grammar Symbol
 - d. Error handler
84. Automatic type conversion of the computer is called _____
- a. ☒ Coercion
 - b. Syntax
 - c. Three Address
 - d. Semantics

85. In 'n' tuple notation _____ field specifies an operator.
- a. Last
 - b. Second
 - c. Three
 - ☒ d. First
86. Indirect triples are used to implement _____ code.
- a. Dependency
 - b. Syntax
 - ☒ c. Three Address
 - d. First
87. Quadruples are used to implement _____ code.
- a. Dependency
 - b. Syntax
 - ☒ c. Three Address
 - d. First
88. In a _____ tree the parent nodes are operators and leaf nodes are symbols.
- a. Dependency
 - ☒ b. Syntax
 - c. Three Address
 - d. First
89. A graph depicting dependencies is called a _____ graph.
- ☒ a. Dependency
 - b. Syntax
 - c. Three Address
 - d. First
90. A synthesized attribute is an attribute whose value at a parse tree node depends on _____
- (a) Attributes at the siblings only
 - ☒ (b) Attributes at parent node only
 - (c) Attributes at children nodes only
 - (d) Attributes at the grammar only
91. Type checking is normally done during?
- a. Lexical Analysis
 - ☒ b. Syntax Analysis
 - c. Syntax Directed Translation
 - d. Code generation
92. Intermediate code is generated in _____ Phase in compiler design
- (a) Second
 - (b) First
 - (c) Fourth
 - ☒ (d) Third
93. An operator is _____ if the same operator name is used for two different operations
- (a) Enhanced
 - ☒ (b) Over loaded
 - (c) Substituted

- (d) Converted
94. Semantic Analysis is related to _____ Part.
- (a) Neither Analysis nor Synthesis
 - (b) Analysis and Synthesis
 - ☒ (c) Analysis
 - (d) Synthesis
95. Pick the odd man out.
- (a) Syntax Tree
 - (b) Triples
 - (c) Quadruples
 - ☒ (d) Indirect Triples
96. Which of the following translation program converts assembly language programs to object program?
- ☒ (a) Assembler
 - (b) Compiler
 - (c) Linker
 - (d) Pre-processor
97. In Quadruple notation _____ fields are used to represent operands.
- (a) 3
 - ☒ (b) 4
 - (c) 2
 - (d) 1
98. Which of the following is not a type expression?
- (a) Char
 - (b) Float
 - (c) Int
 - ☒ (d) Main
99. Synthesized attribute can be easily simulated by a _____.
- ☒ (a) LL
 - (b) Non LR Grammar
 - (c) Ambiguous Grammar
 - (d) LR Grammar
100. What does a Semantic Analyzer do?
- a. Maintain Symbol Table
 - ☒ b. Collect type of information
 - c. Create parse tree
 - d. Create semantic tree
101. Symbol table Keeps tracks the information of
- A) Structure of variables
 - B) Semantics of a variable
 - C) Position of variables
 - D) Location of the variables
102. In which order symbol table entries made in ordered symbol table

- A) Alphabetical manner
 - B) FIFO manner
 - C) LIFO manner
 - D) When the variable is encountered
103. The access time of the symbol table will be logarithmic if it is implemented by
- A) Liner List
 - B) Search Tree
 - C) Hash table
 - D) Self organization list
104. Symbol table cannot be used for
- A) Checking in Time compatibility
 - B) Suppressing duplication of messages
 - C) Storage allocation
 - D) Moving the data
5. In two pass assembler , Symbol table is
- A) Generated in First pass
 - B) Generated in Second pass
 - C) Not generated at all
 - D) Generated and used only in Second pass
105. In two pass assembler , Symbol table is
- A) Generated in First pass
 - B) Generated in Second pass
 - C) Not generated at all
 - D) Generated and used only in Second pass
106. Which table is a permanent database that has an entry for each terminal symbol?
- A) Reductions
 - B) identifier tables
 - C) Literal table
 - D) Terminal Table
107. The load instruction is mostly used to designate a transfer from memory to a processor register known as _____
- A) Accumulator
 - B) Instruction Register
 - C) Program counter
 - D) Memory address Register
108. A group of bits that tell the computer to perform a specific operation is known as _____
- A) Instruction code
 - B) Micro-operation
 - C) Accumulator
 - D) Register
109. Which pointer is maintained at the end of all records in the data structure for the symbol

table.

- A) Top pointer
 - B) Top-1 pointer
 - C) Available pointer
 - D) First pointer
110. Which pointer is maintained to point to first record of self organizing list in the data structure for the symbol table.
- A) Top pointer
 - B) Top-1 pointer
 - C) Accumulator
 - D) First Pointer
111. When the organization symbol table is by means of binary tree, the node structure having how many fields
- A)4
 - B)3
 - C)2
 - D)1
112. In activation record, Which of the following Stores the address of activation record of the caller procedure?
- A) Access Link
 - B) Actual Parameters
 - C) Control Link
 - D) Temporaries
113. Whenever a procedure is executed, its activation record is stored on the _____
- A) Access Stack
 - B) Control stack
 - C) Formal Stack
 - D) Return Stack
114. _____ are known at the runtime only, unless they are global or constant.
- A) values
 - B) object
 - C) Variables
 - D) Pointer
115. The location of memory (address) where an expression is stored is known?
- A) r-value
 - B) k-value
 - C) l-value
 - D) t-value
116. In which mechanism, the calling procedure passes the r-value of actual parameters and the compiler puts that into the called procedure's activation record?
- A) Pass by Reference
 - B) Pass by Name
 - C) Pass by Copy-restore

- D) Pass by Value
117. In which mechanism, the name of the procedure being called is replaced by its actual body?
- A) Pass by Reference
 - B) Pass by Name
 - C) Pass by Copy-restore
 - D) Pass by Object
118. What will be error for the Corresponding Expression $7 = x + y$;
- A) l-value error
 - B) r-value error
 - C) Infinite loop
 - D) T-value error
119. Which of the following storage allocation strategies data structures cannot be created dynamically
- A) Stack Allocation
 - B) Static Allocation
 - C) Memory allocation
 - D) Heap Allocation
120. Which of the following storage allocation strategies data structures cannot be created dynamically
- A) Stack Allocation
 - B) Static Allocation
 - C) Memory allocation
 - D) Heap Allocation
121. In Stack allocation which order activation record and data objects are pushed on to the stack
- A) LIFO
 - B) FIFO
 - C) Searching
 - D) Optimizing

UNIT-IV

121. Optimization can be categorized broadly into ____ types.
- A). 2
 - B). 3
 - C). 4
 - D). 5
122. A fragment of code that resides in the loop and computes the same value at each iteration is called a?
- A). Induction analysis
 - B). Strength reduction
 - C). loop-invariant code
 - D) Code
123. A variable is called an _____ variable if its value is altered within the loop by a loop-invariant value.
- A). Invariant

- B). induction
 - C). strength
 - D). loop
124. Dead code plays no role in any program operation and therefore it can simply be eliminated.
- A). TRUE
 - B). FALSE
 - C). Can be true or false
 - D). Can not say
125. Substitution of values for names whose values are constant, is done in
- A). local optimization
 - B). loop optimization
 - C). constant folding
 - D). Code
126. Peep-hole optimization is a form of
- A). loop optimization
 - B). local optimization
 - C). data flow analysis
 - D). constant folding
127. In analyzing the compilation of PL/I program, the term Machine independent optimization is associated with
- A). creation of more optical matrix
 - B). recognition of basic elements and creation of uniform symbols
 - C). recognition of basic syntactic construction through reductionsc
 - D). use of macro-processor to produce more optimal assembly code
128. Before generating intermediate code, the compiler can modify the intermediate code by address calculations and improving loops.
- A). TRUE
 - B). FALSE
 - C). Can be true or false
 - D). Can not say
129. The compiler can make use of memory hierarchy and CPU registers.
- A). TRUE
 - B). FALSE
 - C). Can be true or false
 - D). Can not say
130. A compiler for a high-level language that runs on one machine and produces code for a different machine is called
- A). optimizing compiler
 - B). one pass compiler
 - C). cross compiler
 - D). multipass compiler
131. The optimization that avoids a test at each iteration is _____.
- A). Inner
 - B). Strength Reduction

- C). Loop Unrolling
 - D). Inner Loops
- 32.The Replacement Of An Expensive Operation By A Cheaper One Is _____.
- A). Inner
 - B). Strength Reduction
 - C). Loop Unrolling
 - D). Inner Loops
- 132.The Replacement Of An Expensive Operation By A Cheaper One Is _____.
- A). Inner
 - B). Strength Reduction
 - C). Loop Unrolling
 - D). Inner Loops
- 133.In Dag The Leaves Are Labelled By _____.
- A). Dag
 - B). Copy Propagation
 - C). Copy Statement
 - D)Identifiers
- 134.A Basic Block Can Be Analyzed By _____.
- A) Dag
 - B). Copy Propagation
 - C). Copy Statement
 - D). Identifiers
135. _____ Often Turns The Copy Statement Into Dead Code
- A.) Dag
 - B). Copy Propagation
 - C). Copy Statement
 - D). Identifiers
- 36.Machine independent code optimization can be applied to _____.
- A) source code
 - B) intermediate representation
 - C) object code
 - D) run-time-out
- 136.Machine independent code optimization can be applied to _____.
- A) source code
 - B) intermediate representation
 - C) object code
 - D) run-time-out
- 137.Which of the following class of statement usually produces no executable code when compiled?
- A)Declaration
 - B)Assignment statements

- C)Input and output statements
 - D)Structural statements
- 138.Substitution of values for names (whose values are constants) is done in
- A)Local optimization
 - B)Loop optimization
 - C)Constant folding
 - D)Strength reduction
- 139.Which of the following statements about peephole optimization is False?
- A)It is applied to a small part of the code
 - B)It can be used to optimize intermediate code
 - C)To get the best out of this, it has to be applied repeatedly
 - D)It can be applied to the portion of the code that is not contiguous It can be applied to the portion of the code that is not contiguous
- 140.The graph that shows basic blocks and their successor relationship is called:
- A)DAG
 - B)Control graph
 - C)Flow graph
 - D)Hamiltonian graph
- 141.In _____, the bodies of the two loops are merged together to form a single loop provided that they do not make any references to each other.
- A)Loop unrolling
 - B)Strength reduction
 - C)Loop concatenation
 - D)Loop jamming
- 142.Loop unrolling is a code optimization technique:
- A)That avoids tests at every iteration of the loop.
 - B)That improves performance by decreasing the number of instructions in a basic block.
 - C)That exchanges inner loops with outer loops
 - D)That reorders operations to allow multiple computations to happen in parallel
- 143.Peer-hole optimization is a form of :
- A)Loop optimization
 - B)Local optimization
 - C)Constant folding
 - D)Data flow analysis
- 144.Dead-code elimination in machine code optimization refers to :
- A) Removal of all labels.
 - B) Removal of values that never get used.
 - C) Removal of function which are not involved.
 - D) Removal of a module after its use.
- 45.Codeoptimisation is responsibility of:
- A)Application programmer
 - B).Parser
 - C).Bootstrapping
 - D).Yacc

145. Code optimisation is responsibility of:
- A). Application programmer
 - B). Parser
 - C). Bootstrapping
 - D). Yacc
146. Determining common sub expression can be done using _____
- A). Compiler
 - B). Interpreter
 - C). DAG
 - D). Parse Tree
147. The statement of the form $a := b$ is called a _____ Statement.
- A). Common
 - B). Copy
 - C). Induction Variable
 - D). Decode
148. An optimized compiler can perform _____
- A). Optimize the code
 - B). occupy less space
 - C). to take less time for execution
 - D). Parser
149. Machine independent optimization is
- A). Register allocation
 - B). Frequency reduction
 - C). Data intermixed with instructions
 - D). Yacc
150. In DAG the interior nodes are labeled with
- A). Number in BFS
 - B). Special colors
 - C). Identifiers
 - D). Number in BFS
151. The process of moving the statement from one part of the program to another is called _____
- A). Code Motion
 - B). Copy
 - C). Induction Variable
 - D). Decode
152. _____ is a simple, systematic technique for allocating registers and managing register spills.
- A). Graph coloring
 - B). Interpreter
 - C). DAG
 - D). Parse Tree

153. The _____ is a node in the flow graph, which precedes all the statements in the loop.
- A). flow graph
 - B). flow chart
 - C). DAG
 - D). Dominator
154. Any statement that immediately follows a goto or conditional goto statement in a sequence of three address statements is a _____.
- A). Leader
 - B). Code Motion
 - C). Copy
 - D). Induction Variable
155. The _____ rules of a language determine which declaration of the name applies when the name appears in the text of a program..
- A). Compiler
 - B). Interpreter
 - C). DAG
 - D). Scope
156. In loop optimization technique whose body is rarely executed is _____
- A). Flow graph
 - B). Blank stripper
 - C). Dominator
 - D). DAG
157. At a point in a program if the value of the variable can be used subsequently, then that variable is _____ Variable.
- A). Live
 - B). Next use
 - C). dominator
 - D). DAG
158. DAG has _____.
- A) only one root
 - B) any number of roots
 - C) no root
 - D) 2 Roots
159. Induction variable elimination is important technique used in _____ optimization.
- A). Killed
 - B). Used
 - C). Live
 - D). Loop
160. An estimate of how frequently a variable is used is _____.
- A) usage count
 - B) reference count
 - C) program count

D) process count

UNIT-V

161. Each three address statement of the form as
A) $X=Y \ 2$
B) $X=Y \ OP \ Z$
C) $Y + Z$
D) Y
162. Register Descriptor Keep tracks the information of
A) Keep tracks what is currently in the Register
B) Keep tracks what is currently not in the Register
C) Keep tracks Location where the current value of the name can be found
D) Keep tracks Location where the current value of the name cannot be found
163. Address Descriptor Keep tracks the information of
A) Keep tracks what is currently in the Register
B) Keep tracks what is currently not in a register
C) Keep tracks Location where the current value of the name can be found
D) Keep tracks Location where the current value of the name cannot be found
164. In the labeling Tree CASE-0 Satisfies the following Condition
A) If 'n' is left node and left most child
B) While $lable(n2)=0$
C) If $lable(n2)>label(n1)$
D) If $lable(n2)\leq label(n1)$
165. In the labeling Tree CASE-1 Satisfies the following Condition
A) If 'n' is left node and left most child
B) While $lable(n2)=0$
C) If $lable(n2)>label(n1)$
D) If $lable(n2)\leq label(n1)$
166. In the labeling Tree CASE-2 Satisfies the following Condition
A) If 'n' is left node and left most child
B) While $lable(n2)=0$
C) If $lable(n2)>label(n1)$
D) If $lable(n2)\leq label(n1)$
167. In the labeling Tree CASE-3 Satisfies the following Condition
A) If 'n' is left node and left most child
B) While $lable(n2)=0$
C) If $lable(n2)>label(n1)$
D) If $lable(n2)\leq label(n1)$
168. Critical edge means
A) Source Basic block has multiple successors , Destination Basic block has multiple Predecessors
B) Source Basic block has multiple successors , Destination Basic block has single Predecessor
C) Source Basic block has single successor , Destination Basic block has multiple

Predecessors

D) Source Basic block has single successor , Destination Basic block has Single Predecessors

169. Load operations belongs to
 - A)LD R1,X
 - B) ST X,R1
 - C) ADD R1,R2,R3
 - D)BR L
170. Store operations belong to
 - A)LD R1,X
 - B) ST X,R1
 - C) ADD R1,R2,R3
 - D)BR L
171. Computational operations belongs to
 - A)LD R1,X
 - B) ST X,R1
 - C) ADD R1,R2,R3
 - D)BR L
172. Unconditional jump operations belongs to
 - A)LD R1,X
 - B) ST X,R1
 - C) ADD R1,R2,R3
 - D)BR L
173. Conditional Jump operations belongs to
 - A)LD R1,X
 - B) BLTZ R,L
 - C) ADD R1,R2,R3
 - D)BR L
174. BLTZ Stands for
 - A)Branch Locate to Zero
 - B) Branch Label to Zero
 - C)Branch Less than Zero
 - D) Break Less than Zero
175. The graph that shows basic blocks and their successor relationship is called:
 - A)DAG
 - B)Control graph
 - C)Flow graph
 - D)Hamiltonian graph
176. Loop unrolling is a code optimization technique:
 - A)That avoids tests at every iteration of the loop.
 - B)That improves performance by decreasing the number of instructions in a basic block.
 - C)That exchanges inner loops with outer loops
 - D)That reorders operations to allow multiple computations to happen in parallel
177. Which one of the following is FALSE?
 - A) A basic block is a sequence of instructions where control enters the sequence at the beginning and exits at the end.

- B) Available expression analysis can be used for common sub expression elimination.
 C) Live variable analysis can be used for dead code elimination.
 D) $x = 4 \quad 5 \Rightarrow x = 20$ is an example of common sub expression elimination.
178. The form of absolute addressing mode
 A)M
 B)R
 C)C(R)
 D)*R
179. The form of Register Addressing mode
 A)M
 B)R
 C)C(R)
 D)*R
80. The form of indexed addressing mode
 A)M
 B)R
 C)C(R)
 D)*R
180. The form of indexed addressing mode
 A)M
 B)R
 C)C(R)
 D)*R
181. The form of indirect register addressing mode
 A)M
 B)R
 C)C(R)
 D)*R
182. The form of indirect indexed addressing mode
 A)M
 B)R
 C)*C(R)
 D)*R
183. The form of immediate (OR) Literal Addressing mode
 A)M
 B)#C
 C)*C(R)
 D)*R
184. Address Cost of Absolute addressing mode
 A)0
 B)1
 C)2
 D)3
185. Address Cost of Index Register addressing mode
 A)0
 B)1

- C)2
- D)3
- 186. What is the instruction cost for the instruction `MOV R0,R1`
 - A) 1
 - B) 2
 - C) 3
 - D) 4
- 187. What is the instruction cost for the instruction `ADD #1,R0`
 - A) 1
 - B) 2
 - C) 3
 - D) 4
- 188. What is the input to Code Generator
 - A) Syntax Analysis
 - B) Lexical Analysis
 - C) Intermediate code generation
 - D) Semantic Analysis
- 189. Linear Representation in input code generator is
 - A) Prefix Notation
 - B) Postfix Notation
 - C) Debugging
 - D) Evaluation
- 190. The Address of Absolute addressing mode
 - A)M
 - B) $C + \text{Contents}(R)$
 - C)R
 - D) $\text{Content}(R)$
- 191. The Address of Register addressing mode
 - A)M
 - B) $C + \text{Contents}(R)$
 - C)R
 - D) $\text{Content}(R)$
- 192. The Address of Register addressing mode
 - A) M
 - B) $C + \text{Contents}(R)$
 - C) R
 - D) $\text{Content}(R)$
- 193. The Address of Indirect Register addressing mode
 - A) M
 - B) $C + \text{Contents}(R)$
 - C) R
 - D) $\text{Content}(R)$
- 194. The Address of Indirect Indexed addressing mode
 - A) M

- B) Content(C+ Contents(R))
 - C)R
 - D) Content(R)
195. Gen_Code(n) is used for
- A)code evaluate at a node
 - B)Code evaluate based on function
 - C)Code evaluate at edge
 - D) Code evaluate at outer node
196. Swap(Reg_Stack) is used to swap
- A) Two registers in the stack
 - B) Top two Registers in stack
 - C) Bottom Two Registers
 - D) Top Three Registers in the Stack
197. In which labeling can be done in labeling algorithm
- A)Top Down Order
 - B) Bottom Up order
 - C) LIFO
 - D)FIFO
198. ----- is the final phase of compiler.
- A) Planar Graph
 - B) Directed Graph
 - C) Bi-Connected Graph
 - D) Null Graph
199. Graph used to represent semantic network is ----
- A) Planar Graph
 - B) Directed Graph
 - C) Bi-Connected Graph
 - D) Null Graph
- 200.In Algebraic expression simplification, $a = a + 1$ can simply be replaced by?
- A)a
 - B)inc a
 - C)DEC a
 - D) MUL a