001. A compiler would tie the parser and the semantic action program fragments together, producing ---------- module. **A**
A   one   B   two
C   three   D   more than one

002. -----------polish places the operator at the right end. **A**
A   Postfix   B   Prefix
C   Infix   D   Polish

003. Implementation of syntax-directed translators describes an ------------ mapping **C**
A   input   B   output
C   input-output   D   parse table

004. ------------ directed translation allows subroutines or semantic actions to be attached to the productions of a context free grammar. **A**
A   syntax   B   semantic
C   syntax and semantic   D   structure

005. Syntax directed translation subroutines generate --------------- code. **A**
A   intermediate   B   source
C   object   D   error

006. A syntax directed translation scheme is merely a --------------grammar **C**
A   regular   B   context-sensitive
C   context-free   D   single

007. The _____ action is enclosed in braces **B**
A   syntax   B   semantic
C   both   D   error

008. Usually the Three address code contains two addresses for the ----------and one for the result **A**
A   operand   B   operator
C   result   D   statement

009. The --------------- statement is an abstract form of intermediate code. **B**
A   2-address   B   3-address
C   Intermediatecode   D   address

010. The properties of an entity are called as -------------- **B**
A   values   B   attributes
C   numbers   D   digits

011. To evaluate the -------------- expression, a stack is used **A**
A   Postfix   B   Prefix
C   Both   D   Polish

012. The general strategy is to scan the postfix code ------------- **A**
A   left-right   B   right-left
C   from middle   D   from right

013. If the attributes of the parent depend on the attributes of the children ,then they are called as ------------- attributes. **D**
A   made   B   discovered
C   new   D   inherited

014. ------------- is a tree in which each leaf represents an operand and each interior node an operator. **C**
A   Parse Tree   B   Semantic Tree
C   Syntax Tree   D   Structured Tree

015. ----------is associating the attributes with the grammar symbols. **B**
A   rotation   B   translation
C   transformation   D   evolving

016. In 3-address code for array reference we assume static allocation of arrays, where subscripts range from 1 to some limit known at ------------------ time. **A**
A   compile   B   run
C   execution   D   process

017. -------refers to the expression or expressions in the form of three address codes.   **C**
  A   value   B   place
  C   code   D   number

018. Which is not the way of implement the 3-address statement.   **D**
  A   Quadruples   B   Triples
  C   Indirect Triples   D   Parse Tree

019. ----------record structure has 4 fields.   **A**
  A   Quadruples   B   Triples
  C   Indirect Triples   D   Parse Tree

020. Parenthesized numbers are used to represent ----------- into the triple structure.   **A**
  A   pointer   B   stack
  C   queue   D   value

021. ---------------- Triples are listing pointers to triples, rather than listing the triples themselves   **B**
  A   Direct   B   Indirect
  C   Multiple   D   New

022. Undeclared name and type incompatibilities are _____.   **B**
  A   Syntactic errors   B   Semantic errors
  C   Lexical Phase errors   D   Reporting errors

023. Minimum distance correction is_____   **A**
  A   Syntactic Phase errors   B   Semantic errors
  C   Lexical Phase errors   D   Reporting errors

024. A compiler needs to collect and use information about the names appearing in the source program. This information is entered into a data structure called a _____.   **A**
  A   Symbol Table   B   Lexical analysis
  C   Syntactic analysis   D   Records

025. . In Triples uses only 3 ----------------.   **A**
  A   fields   B   operator
  C   operand   D   instruction

026. _____ is used in the several stages of the compiler.   **B**
  A   Syntax Table   B   Symbol Table
  C   Queue   D   Stack

027. Information about the name is entered into the symbol table during _____ and _____.   **A**
  A   lexical and syntactic analysis.   B   lexical and code generation.
  C   lexical and error handler.   D   lexical and code optimization.

028. Each entry in the symbol table is a pair of the form _____ and _____.   **A**
  A   Name and information.   B   Name and function.
  C   Name and Data.   D   Name and procedures.

029. The accurate term for Code Optimization is _____.   **B**
  A   Intermediate Code   B   Code Improvement
  C   Latter Optimization   D   Local Optimization.

030. The quality of the object program is generally measured by its _____.   **C**
  A   Cost   B   Time
  C   Size or Its running time   D   Code Optimization.

031. What is the length of identifier for DIMPLE?   **B**
  A   5   B   6
  C   4   D   3

032. Parser discards input symbol until a _____ token is encountered.   **B**
  A   synchronizing   B   Synchronizing
  C   Group   D   none

033. The message should not be redundant in _____.   **D**
  A   Syntactic Phase errors   B   Semantic errors

		C	Lexical Phase errors	D	Reporting errors	

034. Two types of data areas are _____. **B**
A   Common and stack   B   Common and equivalence.
C   Register and stack   D   Code and equivalence.

035. The simplest way to implement a symbol table is as a _____ of records, **A**
one record per name.
A   Linear array   B   Multidimensional array
C   Rectangular array   D   Jagged Array.

036. _____ performed within a straight line and no jump. **A**
A   Local Optimization.   B   Code optimization
C   Latter Optimization   D   Loop optimization.

037. From anyone in the loop to any other, there is a path of length one or more **D**
is_____.
A   Weakly Connected   B   B Unique Entity
C   Multi Connected   D   Strongly Connected.

038. The term constant folding is used for the _____. **C**
A   Local Optimization.   B   Code optimization
C   Latter Optimization   D   Loop optimization.

039. The code optimization techniques consist of detecting _____ in the program and **B**
_____ these patterns.
A   Errors and replacing   B   Patterns and replacing
C   Errors and editing   D   Patterns and editing.

040. _____ may be local or global. **A**
A   Code Optimization   B   Variable
C   Sub expression   D   Patterns.

041. 90-10 rule states that _____ of the time is spent in _____ of the code. **A**
A   90%,20%   B   80%,10%
C   90%,10%   D   90%,90%

042. The important sources of optimization are the identification of **B**
common_____.
A   Regular expression   B   Sub expression
C   expression   D   Time

043. _____ are labeled by operator symbol. **C**
A   Nodes   B   Leaves
C   Interior Nodes   D   Roots.

044. Computed results can be left in _____ as long as possible. **A**
A   Registers   B   Triples
C   Indirect Triples   D   Quadruples.

045. Constructing a DAG from _____ is a good way of determining common **C**
sub expression.
A   2 address statement   B   4 address statement
C   3 address statement   D   5 address statement

046. If some sequences of statements form arithmetic progressions, we say such identifiers **B**
as _____.
A   Reduction   B   Induction Variables
C   Code motion   D   Inner Loops

047. The replacement of an expensive operation by a cheaper one is called _____ **A**
in strength
A   Reduction   B   B Induction Variables
C   Code motion   D   Inner Loops

048. Full form of DAG **C**
A   Dynamic Acyclic Graph   B   B Data Acyclic Graph
C   Directed Acyclic Graph   D   Detecting Acyclic Graph

049. A useful data structure for automatically analyzing basic block is a _____. **C**

A	Dynamic Acyclic Graph	B	Data Acyclic Graph
C	Directed Acyclic Graph	D	Detecting Acyclic Graph

050. Loads and stores are reduced in _____. **B**
A	Global optimization	B	Peephole optimization
C	Latter optimization	D	Local optimization.

051. Which of the following comment about peephole optimization is true? **A**
A	It is applied to a small part of the code and applied repeatedly	B	It can be used to optimize intermediate code
C	It can be applied to a portion of the code that is not contiguous	D	It is applied in the symbol table to optimize the memory requirements.

052. Multiple jumps are reduced accordingly to _____. **C**
A	Local optimization.	B	Code optimization
C	Peephole optimization	D	Latter optimization.

053. Initially the register descriptor shows that all registers as _____. **B**
A	Full	B	Empty
C	Half-filled	D	None.

054. To keep track of the location _____is used. **B**
A	Flag register	B	Address descriptor
C	Allocation descriptor	D	register.

055. _____ invoke a function GETREG (). **C**
A	Code optimization	B	Code motion
C	the code generation algorithm	D	Intermediate code.

056. The DAG representation of a Quadruples is a _____. **C**
A	Nodes	B	Leaves
C	Tree	D	Pattern.

057. In compiler optimization, operator strength reduction uses mathematical identities to replace slow math operations with faster operations. Which of the following code replacements is an illustration of operator strength reduction ? **B**
A	Replace P + P by 2 * P or Replace 3 + 4 by 7.	B	Replace P * 32 by P << 5
C	Replace P * 0 by 0	D	Replace (P << 4) P by P * 15

058. 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. **D**
A	Loop unrolling	B	Strength reduction
C	Loop concatenation	D	Loop jamming

059. The graph that shows basic blocks and their successor relationship is called: **C**
A	DAG	B	Control graph
C	Flow graph	D	Hamiltonian graph

060. Which of the following class of statement usually produces no executable code when compiled? **A**
A	Declaration	B	Assignment statements
C	Input and output statements	D	Structural statements

061. Substitution of values for names (whose values are constants) is done in **C**
A	Local optimization	B	Loop optimization
C	Constant folding	D	Strength reduction

062. In compiler terminology reduction in strength means **D**
A	Replacing run time computation by compile time computation	B	Removing loop invariant computation
C	Removing common subexpressions	D	Replacing a costly operation by a relatively cheaper one

063. Which of the following statements about peephole optimization is **D**
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	D	It can be applied to the portion of the

064. Some code optimizations are carried out on the intermediate code because **A**

A	They enhance the portability of the compiler to other target processors	B	Program analysis is less accurate on intermediate code than on machine code
C	The information from dataflow analysis cannot otherwise be used for optimization	D	The information from the front end cannot otherwise be used for optimization

065. Which one of the following is FALSE? **D**

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 5 => x = 20 is an example of common subexpression elimination.

066. In the context of compiler design, reduction in strength refers to **A**

A	Code optimization obtained using cheaper machine instructions	B	Reduction in accuracy of the output
C	Reduction in the range of values of input variables	D	Reduction in efficiency of the program

067. Loop unrolling is a code optimization technique: **A**

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

068. Pee hole optimization is a form of **C**

A	Loop optimization	B	Local optimization
C	Constant folding	D	Data flow analysis

069. Dead-code elimination in machine code optimization refers to **B**

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.

070. Code optimization is responsibility of: **A**

A	Application programmer	B	Server System
C	Client System	D	Browser

071. Dead-code elimination in machine code optimization refers to **B**

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.

072. The identification of common sub-expression and replacement of runtime computations **A**
by compile-time computations is:

A	Local optimization	B	Constant folding
C	Loop Optimization	D	Data flow analysis

073. One of the purposes of using intermediate code in compilers is to **C**

A	make parsing and semantic analysis simpler.	B	improve error recovery and error reporting.
C	increase the chances of reusing the machine-independent code optimizer in other compilers.	D	improve the register allocation.

074. Consider the grammar rule E E1 - E2 for arithmetic expressions. The code generated **B**

is targeted to a CPU having a single user register. The subtraction operation requires the first operand to be in the register. If E1 and E2 do not have any common sub expression, in order to get the shortest possible code

A	E1 should be evaluated first	B	E2 should be evaluated first
C	Evaluation of E1 and E2 should necessarily be interleaved	D	Order of evaluation of E1 and E2 is of no consequence

075. A grammar that is both left and right recursive for a nonterminal is   **C**

A	Ambiguous	B	Unambiguous
C	Information is not sufficient to decide whether it is ambiguous or Unambiguous.	D	Context Free Grammar

076. Synthesized attribute can easily be simulated by an   **C**

A	LL grammar	B	Ambiguous grammar
C	LR grammar	D	RL grammar

077. For which of the following situations, inherited attribute is a natural choice?   **B**

A	Evaluation of arithmetic expressions	B	Keeping track of variable declaration
C	Checking for the correct use of L-values and R-values	D	Syntax Checking

078. In a syntax directed translation scheme, if the value of an attribute of a node is a function of the values of the attributes of its children, then it is called a   **C**

A	Synthesized attribute	B	Inherited attribute
C	Canonical attribute	D	Register attribute.

079. Incompatible types work with the _____   **B**

A	Syntax tree	B	Semantic analyzer
C	Code optimizer	D	Lexical analyzer

080. Consider the basic block given below.a = b + cc = a + dd = b + ce = d - ba = e + bThe minimum number of nodes and edges present in the DAG representation of the above basic block respectively are   **A**

A	6 and 6	B	8 and 10
C	9 and 12	D	4 and 4

081. Consider the following Syntax Directed Translation Scheme (SDTS), with non-terminals {S, A} and terminals {a,b}.SaA{print1} Sa{print2} SSb{print3}Using the above SDTS, the output printed by a bottom-up parser, for the input aab is: **C**

A	1 3 2	B	2 2 3
C	2 3 1	D	syntax error

082. Which of the following is not an intermediate code form?   **B**

A	Postfix notation	B	Syntax trees
C	Three address codes	D	Quadruples.

083. Three address codes can be implemented by   **D**

A	Indirect triples	B	Direct triples
C	Quadruples	D	Indirect triples and Quadruples

084. Syntax directed translation scheme desirable because   **C**

A	It is based on the syntax	B	Its description is independent of any implementation
C	It is easy to modify	D	Syntaxes

085. The graph depicting the inter-dependencies of the attributes of different nodes in a parse tree is called a   **B**

A	Flow graph	B	Dependency graph
C	Karnaughs graph	D	Steffi graph

086. Choose the correct statements.   **B**

A	Topological sort can be used to obtain an evaluation order of a dependency graph.	B	Evaluation order for a dependency graph dictates the order in which the semantic rules are done.
C	Code generation depends on the	D	Simulated by poises

order in which semantic actions are performed.

087. A syntax tree **A**
- A   Is another name for a parser tree
- B   Is a condensed form of parse tree
- C   Should not have keywords as leaves
- D   is binary search tree

088. Which table is a permanent database that has an entry for each terminal symbol? **D**
- A   Reductions
- B   Identifier table
- C   Literal table
- D   Terminal table

089. Access time of the symbol table will be logarithmic, it is implemented by a **B**
- A   Linear list
- B   Search tree
- C   Hash table
- D   Self-organizing list.

090. Which of the following symbol table implementation is best suited if access time to be minimum? **C**
- A   Linear list
- B   Search tree
- C   Hash table
- D   self-organization list

091. Three address code involves **B**
- A   Exactly 3 addresses
- B   At the most 3 addresses
- C   No unary operator
- D   None of the above.

092. Symbol table can be used for **C**
- A   Checking type compatibility
- B   Suppressing duplicate error messages
- C   Storage allocation
- D   Type casting.

093. Which of the following symbol table implementation is based on the property of locality of reference **D**
- A   Linear list
- B   Search tree
- C   Hash table
- D   self-organization list

094. Which data structure in a compiler is used for managing information about variables and their attributes? **B**
- A   Abstract syntax tree
- B   Symbol table
- C   Semantic stack
- D   Parse table

095. Which of the following optimization techniques are typically applied on loops? **A**
- A   Removal of invariant computation
- B   Elimination of induction variables
- C   Peephole optimization
- D   Invariant computation

096. Concept which can be used to identify loops is? **A**
- A   Dominators
- B   DAG
- C   Breadth first ordering
- D   Nodes

097. An ideal compiler should **B**
- A   Detect error
- B   Detect and report error
- C   Detect, report and correct error
- D   Convert source code.

098. Peephole Optimization is a form of **B**
- A   Loop optimization
- B   Local optimization
- C   Constant folding
- D   Data flow analysis

099. Substitution of values for names whose values are constant, is done in? **C**
- A   Local optimization
- B   Loop optimization
- C   Constant folding
- D   Global optimization

100. Users write the programs in which language? **B**
- A   Low-level Language
- B   High-Level Language
- C   Decimal-Format
- D   Middle-Level Language

101. Does the compiler program translate the whole source code in one step? **D**
- A   No
- B   Depends on the Compiler
- C   Don &#39t Know
- D   Yes

102. A basic block can be analyzed by a **A**
- A   DAG
- B   Graph which may involve cycles
- C   Flow-graph
- D   Flow-chart

103. The technique of replacing run time computation by compile time computations is called **A**
- A Constant folding
- B Code hoisting
- C Peephole optimization
- D Invariant computation

104. The graph that shows basic blocks and their successor relationship is called **B**
- A DAG
- B Flow graph
- C Control graph
- D Leader Graph

105. Reduction in strength means **A**
- A Replacing run computation by compile computation
- B Removing loop invariant computation
- C Removing common sub-expression
- D Replacing a costly operation by a relatively cheaper one

106. In a two pass assembler, adding literals to literal table and address resolution of local symbols are done using? **D**
- A First pass and second respectively
- B Second pass
- C Second pass and first respectively
- D First pass

107. In Two pass assembler the object code generation is done during the _____ **A**
- A Second pass
- B First pass
- C Zero pass
- D Not done by assembler

108. Which of the following class of statement usually produces no executable code when compiled **B**
- A Assignment statement
- B Structural statements
- C Input and output statements
- D Declaration

109. In the compiler, the function of using intermediate code is: **D**
- A to improve the register allocation
- B to increase the error reporting & recovery.
- C to make semantic analysis easier.
- D to increase the chances of re-using the machine-independent code optimizer in other compilers.

110. Which compiler runs on one machine and generates code for multiple machines? **B**
- A Multipass compiler
- B Cross compiler
- C Optimizing compiler
- D Onepass compiler

111. Which optimization technique is used to reduce the multiple jumps? **B**
- A Latter optimization technique
- B Peephole optimization technique
- C Local optimization technique
- D Code optimization technique

112. A ------------ is a program that takes a program written in one language (source language) as an input and produces as output a program in another language (object language **A**
- A Translator
- B Assembler
- C Compiler
- D Interpreter

113. If the source language is high-level language and the object language is a low-level language (assembly or machine), then such a translator is called as a _____ **C**
- A Translator
- B Assembler
- C Compiler
- D Interpreter

114. In which addressing mode the operand is given explicitly in the instruction? **B**
- A Absolute mode
- B Immediate mode
- C Indirect mode
- D Index mode

115. Pick the machine dependent phase of the compiler. **D**
- A Syntax analysis
- B Code generation
- C Lexical analysis
- D Code generation

116. A system program that combines the separately compiled modules of a program into a form suitable for execution is? **B**
- A Assembler
- B Linking loader

C	Cross compiler	D	Load and Go	

117. Type checking is normally done during _____   **C**

A	Lexical analysis	B	Syntax analysis
C	Syntax directed translation	D	Code generation

118. The ------------- phase receives optimized intermediate codes and generates the code   **D**
for execution

A	lexical analyzer	B	syntax analyzer
C	code optimizer	D	code generator

119. Which of the following is NOT an advantage of using shared, dynamically linked   **C**
libraries as compared to statically linked libraries?

A	Smaller sizes of executable	B	Lesser overall page fault rate in the system
C	Faster program start-up	D	Existing programs need not be re-linked to take advantage of newer versions of libraries

120. In an implementation of a compiler, portions of one or more phases are combined into   **A**
a module called a --------.

A	Pass	B	Parser
C	Scanner	D	Set

121. Syntactic structure can be regarded as a tree whose leaves are the ------------   **C**

A	Scanner	B	Parser
C	Tokens	D	Macro

122. ------------- phase designed to improve the intermediate code.   **A**

A	Code optimization	B	Code Generation
C	Intermediate code generator	D	Syntax Analyzer

123. Data structure used to record the information is called a _____ table   **B**

A	Syntactic	B	Symbol
C	Value	D	Tokens

124. Which of the following are labeled by operator symbol?   **B**

A	Root	B	Interior nodes
C	Leaves	D	Nodes

125. What is E val for string 1 * 0?   **C**

A	8	B	6
C	4	D	12

126. The action of parsing the source program into proper syntactic classes is called   **B**
_____

A	Syntax analysis	B	Lexical analysis
C	Interpretation analysis	D	General syntax analysis

127. Which one to the following false?   **D**

A	The code contains loop-in variant computation	B	There is scope of common sub-expression elimination in this code
C	There is scope strength reduction in this code	D	There is scope of dead code elimination in this code

128. What is the function of the syntax phase?   **A**

A	recognize the language and to call the appropriate action routines that will generate the intermediate form or matrix for these constructs	B	Build a literal table and an identifier table
C	Build a uniform symbol table	D	Parse the source program into the basic elements or tokens of the language

129. Which languages necessarily need heap allocation in the runtime environment?   **C**

A	Those that support recursion	B	Those that use dynamic scoping
C	Those that Allow dynamic data	D	Those that use global variables

structure