TKR COLLEGE OF ENGINEERING & TECHNOLOGY
AUTONOMOUS
Approved By AICTE, Affiliated to JNTUH, Accredited by NBA
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
DEPARTMENT of DATA SCIENCE
COMPILER DESIGN MCQ

Question: 1A compiler which allows only the modified section of the source code to be recompiled is called
(A) Subjective compiler
(B) Dynamic compiler
(C) Re-configurable compiler
(D) Incremental compiler
Ans: D
Question: 2A compiler is preferable to an interpreter because
(A) Debugging can be faster and easier
(B) If one changes a statement, only that statement needs re-compilation
(C) It is much helpful in the initial stages of program development
(D) It can generate standalone programs that often take less time for execution
Ans: D

Question: 3Which of the following symbol table implementation has the minimum access time?
(A) Self-organizing list
(B) Linear
(C) Search tree
(D) Hash table
Ans:D
Question: 4A top-down parser generates
(A) Left-most derivation in reverse
(B) Left-most derivation
(C) Right-most derivation in reverse
(D) Right –most derivation
Ans: B
Question: 5 Which of the following parsers is the most powerful?
(A) SLR
(B) LALR
(C) Canonical LR
(D) Operator-precedence
Ans: C
Question: 6 Which table is a permanent database that has an entry for each terminal symbol?
(A) Reductions
(B) Identifier table
(C) Literal table
(D) Terminal table
Ans: D

Question: 7 The action of parsing the source program into proper syntactic classes is called
(A) General syntax analysis
(B) Interpretation analysis
(C) Syntax analysis
(D) Lexical analysis
Ans: D
Q8.A bottom-up parser generates
(A) Left-most derivation in reverse
(B) Left-most derivation
(C) Right-most derivation in reverse
(D) Right –most derivation
Ans: C
Question: 9The bottom-up parsing method is also called
(A) Shift reduce parsing
(B) Predictive parsing
(C) Recursive descent parsing
(D) None of these
Ans: A
Question: 10
The method which merges the bodies of two loops is
(A) Constant folding
(B) Loop jamming
(C) Loop unrolling
(D) None of these
Ans: B
Question: 11 Synthesized attribute can be easily simulated by a
(A) LR grammar
(B) LL grammar
(C) Ambiguous grammar
(D) None of these
Ans: A
Question: 12The top-down parsing method is also called
(A) Operator precedence parsing
(B) Recursive descent parsing
(C) Shift reduce parsing
(D) None of these
Ans: B
Question: 13Which of the following techniques is used to replace run-time computations by compile time computations?
(A) Constant folding
(B) Code hoisting
(C) Pee phole optimization
(D) Invariant computation
Ans: A
Question: 14 The most general phase structured grammar
(A) Context sensitive
(B) Context free
(C) Regular
(D) None of these
Ans: A

Question: 15
Which of the following class of statement usually produces no executable code when compiled?
(A) Assignment statement
(B) Structural statements
(C) Input and output statements
(D) Declaration
Ans: B

Question: 16
The lexical analyzer takes ____ as input and produces a list of ___ of output.
(A) Machine code, mnemonic
(B) Tokens, source code
(C) Source code, tokens
(D) Both a and b
Ans: C

17.Linear analysis is called ____ in a compiler.
(A) Lexical analysis
(B) Scanning
(C) Testing
(D) Both a and b
Ans: D
Question: 18 Lexical analysis is about breaking a sequence of characters into
(A) Tokens
(B) Lines
(C) Groups
(D) Packets
Ans: A
Question: 19 The phase Syntax Analysis is modeled on the basis of
(A) High level language
(B) Low level language
(C) Context free grammar
(D) Regular grammar
Ans: C
Question: 20 Compiler is a program that
(A) Accepts a program written in a high level language and produces an object program
(B) Appears to execute a source program as if it were machine language
(C) Automates the translation of assembly language into machine language
(D) Places programs into memory and prepares them for execution
Ans: A
Question: 21 An optimizing compiler
(A) Is optimized to occupy less space
(B) Optimized the code
(C) Is optimized to take less time for execution
(D) None of these
Ans: B
Question: 22 A compiler for a high level language that runs on one machine and produce code for different machine is called
(A) One pass compiler
(B) Multi pass compiler
(C) cross compiler
(D) optimizing compiler
Ans: C
Question: 23 The graph that shows the basic blocks and their successor relationship is called
(A) Hamiltonian graph
(B) Control graph
(C) Flow graph
(D) DAG
Ans: C
Question: 24 _____ constructs the desired target program from the intermediate representation of the source program.
(A) Analysis part
(B) Lexical part
(C) Synthesis part
(D) None of these
Ans: C

Question: 25 What is the name of the process that determining whether of tokens can be generated by a grammar?
(A) Analyzing
(B) Parsing
(C) Translating
(D) Recognizing
Ans: B
Question: 26 ___ grammars are not phase structured grammar.
(A) Regular
(B) Context free
(C) Context sensitive
(D) None of these
Ans: D
Question: 27 The parsing technique that avoids backtracking is
(A) Top-down parsing
(B) Recursive-descent parsing
(C) Predictive parsing
(D) Both (b) and
(c) Ans: D
Question: 28 CSG (COntext Sensitive Grammar) can be recognized by
(A) Push down automata
(B) Finite state automata
(C) 2-way linear bounded automata
(D) All of the above
Ans: C
Question: 29 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 tree
(D) Hash table
Ans: B
Question: 30 The process of searching for matched tokens is typically described using ___
(A) Finite automata
(B) Regular expressions
(C) Context free grammar
(D) Both a and b
Ans: D
Question: 31 Loader is a program that
(A) Places programs into memory and prepares them for execution
(B) Automates the translation of assembly language into machine language
(C) Accepts a program written in a high level language and produces an object program
(D) Appears to execute a source program as if it were machine language
Ans: A
Question: 32 Interpreter is preferred over a compiler is
(A) During program development phase
(B) When storage space is to be minimized

(C) When efficient use of computer resources is the consideration
D.All of these
Ans: A
Question: 33 Which of the following is used for grouping of characters into tokens?
(A) Scanner
(B) Code generator
(C) Code optimizer
(D) Parser
Ans: A
Question: 34 Type checking is normally done during
(A) Code optimization
(B) Syntax directed translation
(C) Lexical analysis
(D) Syntax analysis
Ans: B
Question: 35 Back- patching is useful for handling
(A) Forward references
(B) Backward references
(C) Conditional jumps
(D) Unconditional jumps
Ans: A
Question: 36_____ is considered as a sequence of characters in a token.
(A) Pattern
(B) Texeme
(C) Lexeme
(D) Mexem
Ans: C
Question: 37____ or scanning is the process, where the stream of characters making up the source program is read from left to right and grouped into tokens.
(A) Modeling
(B) Diversion
(C) Lexical analysis
(D) All of these
Ans: C
Question: 38 LR stands for
(A) Left to right
(B) Left to right reduction
(C) Right to left
(D) Left to right and right most derivation in reverse
Ans: D
Question: 39 Recursive descent parsing belongs to the class of
(A) Top-down parsing
(B) Bottom-up parsing
(C) Predictive parsing
(D) None of these
Ans: A
Question: 40The graph depicting the inter-dependencies of the attribute of different nodes in a parse is called
(A) Dependency graph
(B) Karnaugh's graph

(C) Steffi graph
(D) Flow graph
Ans: C
Question: 41 Compiler should report the presence of program, in translation process.
(A) Text
(B) Errors
(C) Classes
(D) Objects
Ans: B
Question: 43 Minimum hamming distance method is used for connection of
(A) Algorithm errors
(B) Transcription errors
(C) Semantic errors
(D) Syntactic errors
Ans: D
Question: 44 The output of lexical analyzer is
(A) Strings of characters
(B) A set of tokens
(C) Syntax tree
(D) A set of regular expressions
Ans: B
Question: 45 Symbol table can be used for
(A) Storage allocation
(B) Checking type compatibility
(C) Suppressing duplication of error messages
(D) All of these
Ans: D
46.Compiler can check ____ error.
(A) syntax
(B) logical
(C) content
(D) Both a and b
Ans: A

Question: 47 Which of the following is language processor?
(A) Interpreters
(B) Assembler
(C) Compilers
(D) All of these
Ans: D
Question: 48 CFG (Context Free Grammar) can be recognized by a
(A) Push down automata
(B) Finite state automata
(C) 2 way linear bounded automata
(D) Both a and c
Ans: D
Question: 49 Handle pruning is the technique used to obtain
(A) Canonical reduction sequence
(B) Canonical derivation sequence
(C) Both (a) and (b)

(D) None of these
Ans: A
Question: 50 Semantic errors can be detected at
(A) Compile time only
(B) Run-time only
(C) Both (a) and (b)
(D) None of these
Ans: C
Question: 51 A permanent database in the general model of compiler is
(A) Source code
(B) Terminal table
(C) Identifier table
(D) Literal table
(E) Ans: B
Question: 52 Which of the following actions an operator-precedence parser may take to recover from an error?
(A) Insert symbols onto the stack
(B) Delete symbols from the stack
(C) Insert or delete symbols from the input
(D) All of these
Ans: D
Question: 53 Which of the following system software resides in main memory always?
(A) Text editor
(B) Assembler
(C) Linker
(D) All of these
Ans: D
Question: 54 Left factoring is the process of factoring out the common
(A) Prefixes of alternates
(B) Suffixes of alternates
(C) Both(a) and (b)
(D) None of these
Ans: A
Question: 55_____ is/are parts of the compiler.
(A) Execution part
(B) Analysis part
(C) Synthesis part
(D) Both B and C
Ans: D
Question: 56 How many parts of compiler are there?
(A) 2
(B) 4
(C) 6
(D) 8
Ans:A
Question: 57 Which of the following is/are the phases of compiler?
(A) Code generation
(B) Syntax analyzer
(C) Lexical analyzer
(D) All of these
Ans: D

Question: 58 Compiler translates the source code to
(A) Machine code
(B) Executable code
(C) Binary code
(D) Both A and C
Ans: D
Question: 59Grammar of the programming is checked at _____ phase of compiler.
(A) Syntax analysis
(B) Semantic analysis
(C) Code generation
(D) Code optimization
Ans: A

Question: 60 Which of the following groups is/are token together into syntactic structures?
(A) Syntax analyzer
(B) Semantic analyzer
(C) Lexical analyzer
(D) Intermediate code generation
Ans: C
Question: 61 What is a compiler?
(A) A compiler is calculating device which is providing very efficient execution
(B) A compiler is a general purpose language providing very efficient execution
(C) A compiler converts the whole of a higher level program code into machine code in one step
(D) A compiler does a conversion line by line as the program is run
Ans: C
Question: 62 Only OS independent compiler is
(A) Java compiler
(B) Visual basic compiler
(C) Pascal compiler
(D) Turbo C compiler
Ans: A
Question: 63
The phase 'Semantic Analysis' is responsible for Compiler.
(A) Check semantics
(B) Static checking
(C) Type checking
(D) All of these
Ans: D

Question: 64 The errors that can be pointed out by the compiler are known as
(A) Internal errors
(B) Logical errors
(C) Semantic errors
(D) Syntax errors
Ans: D
Question: 65 What do you call the translator which takes assembly language program as input & produce machine language code as output?
(A) Assembler
(B) Compiler
(C) Debugger
(D) Interpreter
Ans: A
Question: 66 Which of the following cannot be used as an intermediate code form?
(A) Quadruples
(B) Syntax trees
(C) Three address codes
(D) Post fix notation
Ans: A
Question: 67 Which of the following can be used to identify loops?
(A) Dominators
(B) Reducible graphs
(C) Depth first ordering

(D) All of these
(E) Ans: D
Question: 68 The cost of developing a compiler is proportional to
(A) Flexibility of the available instruction set
(B) Complexity of the architecture of the target machine
(C) Complexity of the source language
(D) All of these
Ans: D
Question: 69 Replacement of an expensive operation by a cheaper one is called
(A) Reduction in strength
(B) Loop-invariant computation Code motion
(C) None of these
Ans: A
Question: 70 Which of the following is not a source of error?
(A) Faulty design specification
(B) Faulty algorithm
(C) Compilers themselves
(D) None of these
Ans: D
Question: 42 A basic block can be analyzed by
(A) Graph with cycles
(B) DAG
(C) Flow graph
(D) None of these
Ans: B

Question: 71Programming languages can be categories as

_____

(A) Assembly language
(B) High level language
(C) Machine language
(D) All of these
Ans: D
Question: 72 What is the meaning of a Compiler?
(A) Name given to the computer operator
(B) Part of the digital machine to store information
(C) Operator of Boolean algebra
(D) Translator to convert source program into object code
Ans: D
Question: 73Language used in a computer that is similar to the languages of human and is easy to understand, is referred as
(A) Object code
(B) Source code
(C) Machine language
(D) High level language
Ans: D
Question: 74 Which among the following is/are interpreted language?
(A) C++
(B) Java
(C) Visual basic
(D) Both B and C
Ans: D
Question: 75 What is a notation for writing programs, which are specifications of a computation or algorithm?
(A) A programming language
(B) An operating system
(C) Hardware
(D) Web browser
Ans: A
Question: 76 What is the action of parsing the source program into proper syntatic classes?
(A) Syntax analysis
(B) Lexical analyis
(C) Interpretation analysis
d. General syntax analysis
Ans: B
Question: 77____ is a process of finding a parse tree for a string of tokens.
(A) Analyzing
(B) Recognizing
(C) Parsing
(D) Tokenizing
Ans: C
Question: 78 Representing the syntax by a grammar is advantageous. What is the cause?
(A) It is concise
(B) It is accurate
(C) Automation becomes easy
(D) All of the above
Ans: D

Question: 79 A grammar that produces more than one parse tree for some sentence is called as
(A) Ambiguous
(B) Regular
(C) Unambiguous
(D) All of these
Ans: A
Question: 80 A_____is a software utility that translates code written in higher language into a low level language.
(A) Compiler
(B) Converter
(C) Text editor
(D) Code optimizer
Ans: A
Question: 81Which programming languages are classified as low level languages?
(A) BASIC, COBOL, FORTRAN
(B) Assembly languages
(C) Knowledge based Systems
(D) Prolog 2, Expert Systems
Ans: B
Question: 82 A compiler translate high level programs into low level programs, which is called as
(A) Beta code
(B) Compiled code
(C) Source code
(D) Object code
Ans: D
Question: 83 What is an interpreter?
(A) An interpreter is a decoder which provides very efficient execution
(B) An interpreter is a general purpose language providing very efficient execution
(C) An interpreter does the conversion line by line as the program is run
(D) An interpreter is the representation of the system being designed
Ans: D
Question: 84 The translator program used in assembly language is called
(A) Assembler
(B) Interpreter
(C) Compiler
(D) Translator
Ans: A
Question: 85 A(n)__language reflects the way people think mathematically.
(A) Functional programming
(B) Cross platform programming
(C) 3 GL business programming
(D) Event driven programming
Ans : A
86. Pee Hole optimization _____
a) Loop Optimization
b) Local Optimization
c) Constant folding
d) Data Flow

analysis Answer: c

87. The optimization which avoids test at every iteration is?
a) Loop unrolling
b) Loop jamming
c) Constant folding
d) None of the mentioned
Answer: a

88. Shift reduce parsers are _____
a) Top down Parser
b) Bottom Up parser
c) May be top down or bottom up
d) None of the mentioned
e) Answer: b

1. DAG representation of a basic block allows _____
a) Automatic detection of local common sub expressions
b) Detection of induction variables
c) Automatic detection of loop variant
d) None of the mentioned
Answer: a
2. Inherited attribute is a natural choice in _____
a) Tracking declaration of a variable
b) Correct use of L and R values
c) All of the mentioned
d) None of the entioned
Answer: a
3. An intermediate code form is _____
a) Postfix notation
b) Syntax Trees
c) Three Address code
d) All of the mentioned
Answer: d
4. Which of the following actions an operator precedence parser may take to recover from an error?
a) Insert symbols onto the stack
b) Delete symbols from the stack
c) Inserting or deleting symbols from the input
d) All of the mentioned
Answer: d
5. What is the output of lexical analyzer?
a) A set of regular expression
b) Syntax tress
c) Set of Token
d) String of Characters
Answer: c
6. Which of the following is used for grouping of characters into tokens?
a) Parser
b) Code optimization
c) Code generator
d) Lexical analyser
Answer: d

7. Shift reduce parsers are _____
   a) Top down parser
   b) Bottom up parser
   c) Maybe both
   d) None of the mentioned
   Answer: b
8. A bottom up parser generates _____
   a) Right most derivation
   b) Right most derivation in reverse
   c) Left most derivation
   d) Left most derivation in reverse
   Answer: b
9. What is garbage?
   a) Unallocated storage
   b) Allocated storage whose access paths are destroyed?
   c) Allocated storage
   d) Uninitialized storage
   Answer-b
10. An optimizing compiler _____
   a) Is optimized to occupy less space
   b) Is optimized to take less time for execution
   c) Optimized the code
   d) None of the mentioned
   Answer: c
11. Input to code generator is _____
   a) Source code
   b) Intermediate code
   c) Target code
   d) All of the mentioned
   Answer: b
12. 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) None of the mentioned
   Answer: c
13. In a bottom up evaluation of a syntax direction definition, inherited attributes can ____
   a) Always be evaluated
   b) Be evaluated only if the definition is L –attributed
   c) Evaluation only done if the definition has synthesized attributes
   d) None of the mentioned
   Answer: c
14. The graph that shows basic blocks and their successor relationship is called _____
   a) DAG
   b) Flow Chart
   c) Control Graph
   d) Hamilton graph
   Answer: b
15. _____or scanning is the process where the stream of characters making up the source program is read from left to right and grouped into tokens.
   a) Lexical Analysis

b) Diversion
c) Modeling
d) None of the mentioned
Answer: a

16. _____is a graph representation of a derivation.
a) The parse tree
b) Oct tree
c) Binary tree
d) None of the mentioned
Answer: a

17. Assume that the SLR parser for a grammar G has n1 states and the LALR parser for G has n2 states. Hence which one is true?
a) N1 is necessarily less than n2
b) N1 is necessarily equal to n2
c) N1 is necessarily greater than n2
d) None of the mentioned
Answer: b

18. Which of these is also known as look-head LR parser?
a) SLR
b) LR
c) LLR
d) None of the mentioned
Answer: c

19. What is the similarity between LR, LALR and SLR?
a) Use same algorithm, but different parsing table
b) Same parsing table, but different algorithm
c) Their Parsing tables and algorithm are similar but uses top down approach
d) Both Parsing tables and algorithm are different
Answer: a

20. An LR-parser can detect a syntactic error as soon as _____
a) The parsing starts
b) It is possible to do so a left-to-right scan of the input
c) It is possible to do so a right-to-left scan of the input
d) Parsing ends
Answer: b

21. Which of these is true about LR parsing?
a) Is most general non-backtracking shift-reduce parsing
b) It is still efficient
c) Is most general non-backtracking shift-reduce parsing & It is still efficient
d) None of the mentioned
Answer: c

22. Which of the following is incorrect for the actions of A LR-Parser I) shift s ii) reduce A->ß iii) Accept iv) reject?
a) Only I)
b) I) and ii)
c) I), ii) and iii)
d) I), ii) , iii) and iv)
Answer: c

23. If a state does not know whether it will make a shift operation or reduction for a terminal is called

_____

a) Shift/reduce conflict
b) Reduce /shift conflict
c) Shift conflict
d) Reduce conflict
Answer: a

24. When there is a reduce/reduce conflict?
a) If a state does not know whether it will make a shift operation using the production rule i or j for a terminal
b) If a state does not know whether it will make a shift or reduction operation using the production rule i or j for a terminal
c) If a state does not know whether it will make a reduction operation using the production rule i or j for a terminal
d) None of the mentioned
Answer: c

25. When ß (in the LR(1) item A -> ß.a,a) is not empty, the look-head ____
a) Will be affecting
b) Does not have any affect
c) Shift will take place
d) Reduction will take place
Answer: b

26. When ß is empty (A -> ß.,a), the reduction by A-> a is done by _____
a) If next symbol is a terminal
b) Only If the next input symbol is a
c) Only If the next input symbol is A
d) Only if the next input symbol is a
Answer: d

27. The construction of the canonical collection of the sets of LR (1) items are similar to the construction of the canonical collection of the sets of LR (0) items. Which is an exception?
a) Closure and goto operations work a little bit different
b) Closure and goto operations work similarly
c) Closure and additive operations work a little bit different
d) Closure and associatively operations work a little bit different
Answer: a

28. What is terminal table?
a) Contains all constants in the program
b) Is a permanent table of decision rules in the form of patterns for matching with the uniform symbol table to discover syntactic structure
c) Consist of a full or partial list of the token is as they appear in the program created by lexical analysis and used for syntax analysis and interpretation
d) Is a permanent table which lists all keywords and special symbols of the language in symbolic form
e) Answer: d

29. Advantage of incorporating the macro-processor into pass 1 is that _____
a) Many functions have to be implemented twice
b) Functions are combined not necessarily creating intermediate files as output from the macro-processor and input to the assembler
c) More flexibility is provided to the programmer in that he may use all the features of the assembler in conjunction with macros

d) All of the mentioned
Answer: d

30. Which of the following is a phase of a compilation process?
    a) Lexical Analysis
    b) Code Generation
    c) Lexical Analysis & Code Generation
    d) None of the mentioned
    Answer: c
31. System program such as compiler are designed so that they are _____
    a) Re-enterable
    b) Non reusable
    c) Serially usable
    d) None of the mentioned
    Answer: a
32. A series of statements explaining how the data is to be processed is called _____
    a) Assembly
    b) Machine
    c) COBOL
    d) Program
    Answer: d
33. A loader is a program that _____
    a) Program that places functions into memory and prepares them for execution
    b) Program that automates the translation of assembly language into machine language
    c) Program accepting another program written in a high level language and produces as object program
    d) None of the mentioned
    e) Answer: a
34. A system program that setup an executable program in main memory ready for execution is?
    a) Assembler
    b) Linker
    c) Loader
    d) Load and go
    Answer: c
35. Which of the following system program forgoes the production of object code to generate absolute machine code and load it into the physical main storage location from which it will be executed immediately upon completion of the assembly?
    a) Two pass assembler
    b) Load and go assembler
    c) Macro processor
    d) Linker
    Answer: b
36. Uniform symbol table _____
    a) Has all constants in the program
    b) Permanent table of rules in the form of patterns for matching with the uniform symbol table to discover syntactic structure
    c) Consists of full or partial list of the tokens as they appear in the program created by Lexical analysis and used for syntax analysis and interpretation
    d) A permanent table which has all key words and special symbols of the language in symbolic form
    Answer: c

37. Assembler is a program that _____
    a) Puts programs into memory and executes them
    b) Translates the assembly language into machine language
    c) Writes in high level language and produces an object program
    d) None of the mentioned Answer: b
38. A simple two-pass assembler does which of the following in the first pass?
    a) It allocates space for the literals Calculates total length of the program
    b) Symbol table is built for the symbols and their value
    c) All of the mentioned
    d) Answer: d
39. A shift reduce parser carries out the actions specified within braces immediately after reducing with the corresponding rule of grammar S—-> xxW (PRINT "1") S—-> y { print " 2 " } S—-> Sz { print " 3 ") What is the translation of xxxxyzz using the syntax directed translation scheme described by the above rules?
    a) 23131
    b) 11233
    c) 11231
    d) 33211
    Answer: a
40. In operator precedence parsing whose precedence relations are defined _____
    a) For all pair of non-terminals
    b) For all pair of terminals
    c) To delimit the handle
    d) None of the mentioned
    Answer: a
41. LR parsers are attractive because _____
    a) It can be constructed to recognize CFG corresponding to almost all programming constructs
    b) It does not backtrack
    c) It can be constructed to recognize CFG corresponding to almost all programming constructs & It does not backtrack
    d) None of the mentioned
    Answer: c
42. Which is the most powerful parser?
    a) SLR
    b) LALR
    c) Canonical LR
    d) Operator Precedence
    Answer: c
43. The address code involves _____
    a) Exactly 3 address
    b) At most Three address
    c) No unary operators
    d) None of the mentioned
    Answer: d
44. An intermediate code form is _____
    a) Postfix Notation
    b) Syntax Trees
    c) Three address code
    d) All of the mentioned
    Answer: d

45. In a single pass assembler, most of the forward references can be avoided by putting the restriction _
    a) On the number of strings/life reacts
    b) Code segment to be defined after data segment
    c) On unconditional rump
    d) None of the mentioned
    Answer: b
46. Assembly code data base is associated with _____
    a) Code is converted into assembly
    b) Table of rules in the form of patterns for matching with the uniform symbol table to discover syntactic structure
    c) All of the mentioned
    d) None of the mentioned
    Answer: a
47. What is the function of the syntax phase?
    a) recognize the language and to cal 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
    Answer: a
48. If E be a shifting operation applied to a function f, such that E(f) = f (x +β), then?
    a) E (αf+β g) = α E(f) +β E (g)
    b) E (αf +β g) =. (α+ β) + E (f + g)
    c) E (αf +β g) = α E (f+gβ)
    d) E (αf +β g) = αβ E (f + g)
    Answer: a
49. Pass I _____
    a) Assign address to all statements
    b) Save the values assigned to all labels for use in pass 2
    c) Perform some processing
    d) All of the mentioned
    Answer: d
50. Which table is a permanent database that has an entry for each terminal symbol?
    a) Terminal Table
    b) Literal Table
    c) Identifier Table
    d) None of the mentioned
    Answer: a
51. The root directory of a disk should be placed _____
    a) At a fixed address in main memory
    b) At a fixed location on the disk
    c) Anywhere on the disk
    d) None of the mentioned
    Answer: b
52. The segment base is specified using the register named is?
    a) ORG instructions
    b) TITLE instruction
    c) ASSUME instruction
    d) SEGMENT instruction
    Answer: a

53. In what module multiple instances of execution will yield the same result even if one instance has not terminated before the next one has begun?
    a) Non usable module
    b) Serially usable
    c) Re-enter-able
    d) None of the mentioned
    Answer: c
54. Which of the following is true for machine language?
    a) Continuous execution of program segments
    b) Depicting flow of data in a system
    c) A sequence of instructions which solves a problem
    d) The language which interacts with the computer using only the binary digits 1 and 0
    Answer: d
55. The table created by lexical analysis to describe all literals used in the source program is?
    a) Terminal table
    b) Literal table
    c) Identifier table
    d) Reductions
    Answer: b
56. Which is not true about syntax and semantic parts of a computer language?
    a) Semantics is checked mechanically by a computer
    b) Semantics is the responsibility of the programmer
    c) All of the mentioned
    d) None of the mentioned
    Answer: d
57. Which of the following statement is true?
    a) SLR powerful than LALR
    b) LALR powerful than Canonical LR parser
    c) Canonical LR powerful than LALR parser
    d) The parsers SLR= Canonical LR=LALR
    Answer: c
58. Which of the following features cannot be captured by CFG?
    a) Syntax of if-then-else statements
    b) Syntax of recursive procedures
    c) A variable is declared before its use
    d) Matching nested parenthesis
    Answer: d
59. In which of the following no information hiding is done?
    a) Compile prig 1, prig 2
    b) Run test, prog
    c) Load R1, A
    d) 00100100001010
    Answer: d
60. The identification of common sub-expression and replacement of run-time computations by compile-time computations is ___
    a) Local optimization
    b) Loop optimization
    c) Constant folding
    d) Data flow analysis
    Answer: c
61. The specific task storage manager performs _____

a) Allocation/ deal location of programs
b) Protection of storage area assigned to the program
c) Allocation/ deal location of programs & protection of storage area assigned to the program
d) None of the mentioned
Answer: c

62. When a computer is rebooted, a special type of loader is executed called?
a) Compile and GO " loader
b) Boot loader
c) Bootstrap Loader
d) Relating Loader
Answer: c

63. What is the disadvantage of " Compile and GO " loading scheme?
a) Memory is wasted because the case occupied by the assembler is unavailable to the object program
b) Necessary to translate the users program
c) It is very difficult to handle multiple segments, even when the source programs are in different languages and to produce orderly modular programs
d) All of the mentioned
Answer: d

64. What is the function of the storage assignment?
a) Assign storage to all variables referenced in the source program
b) Assign storage to all temporary locations that are necessary for intermediate results
c) Assign storage to literals, and to ensure that the storage is allocated and appropriate locations are initialized
d) All of the mentioned
Answer: d

65. Generation of intermediate code based on a abstract machine model is useful in compilers because ___
a) Implementation of lexical analysis and syntax analysis is made easier
b) Writing for intermediate code generation
c) Portability of the front end of the compiler
d) None of the mentioned
Answer: a

66. Which of the following module does not incorporate initialization of values changed by the module?
a) Non reusable module
b) Serially reusable module
c) Re-enterable module
d) All of the mentioned
Answer: a

67. The best way to compare the different implementations of symbol table is to compare the time required to ____
a) Add a new name
b) Make an enquiry
c) Add a new name and make an enquiry
d) All of the mentioned
Answer: d

68. Dynamic linking can cause security concerns because _____
a) Security is dynamic
b) None of the mentioned

c) Security is dynamic & Cryptographic procedures are not available for dynamic linking
d) Cryptographic procedures are not available for dynamic linking
Answer: d

69. Which of the following statements is FALSE?
a) In up-typed languages, values do not have any types & Dynamic languages have no variables types
b) In up-typed languages, values do not have any types
c) Dynamic languages have no variables types
d) None of the mentioned
Answer: c

70. What is grammar?

71. S -> C C

72. C -> eC | d

73. a)LL(1)
b)SLR(1)butnotLL(1)
c)LALR(1)butnotSLR(1)
d) LR (1) but not LALR (1) Answer: c

74. The 3-address code sequence generated by which definition?

```
75. S -> id: = E "
76.   newtemp ();
77.    gen(t . place . place;); .place t} "
```

80. a)X=Y+Z
b)t1=Y+Z;Xt1
c)t1=Y;t2=t1+Z;X
=t2
d) t1 = Y; t2 = Z; t3 + t2; X = t3
Answer: d

81. Which of the following is NOT an advantage of using shared, dynamically linked 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
Answer: c

82. Consider the grammar rule. E -> E1 − E2 for arithmetic expressions. 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
Answer: b

83. The grammar A ->AA |(A)| ε is not suitable for predictive-parsing because the grammar is _____

a) Ambiguous
b) Left-recursive
c) Right-recursive
d) An operator-grammar
Answer: a

84. Consider the grammar.

85. E -> E + n | E # n | n

86. For a sentence n+n, the form of the reduction are _____
a)n,E+n and E+n#
b)n,E+n and n
c)n,n+n and E+E#
d) n , E + n and E # n n+n#n

Answer: d

87. S -> (S)| a
Let the number of states in SLR(1), LR(1) and LALR(1) parsers for the grammar n1 n2 and n3 respectively.
a) n1 < n2 < n3
b) n1 = n3 < n2
c) n1 = n2 = n3
d) n1 $ n3 $ n2
Answer: b

88. Which one of the following is true about the action of yacc for the given grammar?
a) It detects recursion and eliminates recursion
b) It detects reduce-reduce conflict and resolves
c) It detects shift-reduce conflict and resolves the conflict in favor of a shift over a reduce action
d) It detects shift-reduce conflict and resolves the conflict in favor of a reduce over a shift action
Answer: c

89. What precedence and associativity properties does the generated parser realize?
a) Equal precedence and left associativity; expression is evaluated to 7
b) Equal precedence and right associativity, expression is evaluated to 9
c) Precedence of 'x' is higher than that of '+', and both operators are left associative; expression is evaluated to 7
d) Precedence of ' # ' is higher than that of '#', and both operators are left associative; expression is evaluated to 9
Answer: b

90. Consider the following grammar.

```
91. S > S * E
92. S > E
93. E > F + E
94. E > F
95. F > id
```

96. Consider the following LR(0) items corresponding to the grammar above.

97. (i) S -> S * .E
98. (ii) E -> F . + E

99. (iii) E -> F + .E

100. Given the items above, which two of them will appear in the same set in the canonical sets-of-items for the grammar? a)(i)and(ii)
b)(ii)and(iii)
c)(i)and(iii)
d) None of the mentioned
Answer: c

101. Consider the following grammar:

102. S > FR
103. R > * S | ε
104. F > id

105. In the predictive parser table, M , of the grammar the entries M [S, id] and M [R,$] respectively.
a){S"FR}and{R"ε}
b) {S"FR}and{}
c) {S"FR}and{R"*S}
d) {F " id} and {R " ε}
e) Answer: a

106. Consider the following translation scheme.

107. S > ER
108. R > * E{print(' * ');
109. R | f
110. E > F + E{print(' + '); | F F > (S) | id{print(id.value);}

111. Here id is a taken that represents an integer and id. value represents the corresponding integer value. For an input '2 * 3 + 4', this translation scheme prints? a)2*3+4
b)2*+3
4
c)23*4
+
d) 2 3 4 + *
Answer: b

112. Consider the following C code segment.

113. for if i # i } } }

114. Which one to the following false?
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
e) Answer: d

115. Consider the following grammar.

```
116. S -> S * E
117. S -> E
118. E -> F + E
119. E -> F
120. F -> id
```

121. Consider the following LR (0) items corresponding to the grammar above.

```
122. (i) S -> S * .E
123. (ii) E -> F. + E
124. (iii) E “F + .E
```

125.Given the items above, which two of them will appear in the same set in the canonical sets-of-items for the grammar?

a) (ii)
b) (i) and (iii)
c) (iii)
d) None of the mention
Answer: C

Which one of the following grammars generates the language L = (a i b i | i ! j}? a)

```
 S ->AC | CB
```

b)

```
S -> aS | Sb | a | b
C -> aCb | a | b
A -> aA | ε
B -> Bb | ε
```

c)

```
 S -> ACCB
```

d)

```
S -> AC | CB
C -> aCb |!
C -> aCb |!
A -> aA |!
A -> aA | a
B -> Bb |!
B -> bB | b
```

Answer: d

126. Which one of the following is a top-down parser?

a) Recursive descent parser
b) Operator precedence parser
c) An LR(k) parser
d) An LALR(k) parser
Answer: a

127. Consider the grammar with non-terminals.The grammar is NOTLL(1) because ____

```
N = {S , C , S}, terminals T = {a, b , i , t, e}, with S as the start symbol,
and the following of rules
S -> iCtSS1 | a
S1 -> eS | ε
C -> b
```

a) It is left recursive
b) It is right recursive
c) It is ambiguous
d) It is not context-free
Answer: a

128. Consider the following two statements: P: Every regular grammar is LL(1)
Q: Every regular set has LR(1) grammar
Which of the following is TRUE?
a) Both P and Q are true
b) P is true and Q is false
c) P is false and Q is true
d) Both P and Q are false
Answer: a

129. Which of the following strings is generated by the grammar?

```
S->bA        S->aB
A->a           B->b
A->aS            B->bS
A->bAA           B->aBB
```

a) aaaabb
b) aabbbb
c) aabbab
d) abbbba
Answer: c

130. How many derivation trees are there?

```
S->bA        S->aB
A->a           B->b
A->aS            B->bS
A->bAA           B->aBB
```

a) 1
b) 2
c) 3
d) 4 Answer: b

131. Which of the following describes a handle (as applicable to LR-parsing) appropriately?
a) It is the position in a sentential form where the next shift or reduce operation will occur
b) It is a non-terminal whose production will be used for reduction in the next step
c) It is a production that may be used for reduction in a future step along with a position in the sentential form where the next shift or reduce operation will occur.
d) It is the production p that will be used for reduction in the next step along with a

position in the sentential form where the right hand side of the production may be found
Answer: d

132. Some code optimizations are carried out on the intermediate code because _____
a) They enhance the portability of the complier to other target processors
b) Program analysis is name accurate on intermediate code than on machine code
c) The information from data flow analysis cannot otherwise be used for optimization
d) The information from the front end cannot otherwise be used for optimization Answer: b

133. An LALR(1) parser for a grammar can have shift-reduce (S-R) conflicts if and only if ____
a) The SLR(1) parser for G has S-R conflicts
b) The LR(1) parser for G has S-R conflicts
c) The LR(0) parser for G has S-R conflicts
d) The LALR(1) parser for G has reduce-reduce conflicts
Answer: b

134. The lexical analyzer takes_____as input and produces a stream of_____as output.
a) Source program, tokens
b) Token, source program
c) Either A and B
d) None of the mentioned
Answer: a

135. The action of parsing the source program into proper syntactic classes is called ____
a) Syntax analysis
b) Lexical analysis
c) Interpretation analysis
d) General syntax analysis
Answer: b

136. What is the task of the lexical analysis?
a) None of the mentioned
b) To build a literal and identifier table
c) To build a uniform symbol table
d) To build a uniform symbol table, literal and identifier table
Answer: d