***Department: Computer Science & Engineering***

***SUBJECT: COMPILER DESIGN***

***Programme: B.Tech***

MCQs Questions answers with solution.

Question: 1

A 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: 2

A 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 stand alone programs that often take less time for execution

**Ans: D**

Question: 3

Which 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: 4

A 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: 9

The 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: 12

The 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: 13

Which 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**

Question: 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 modelled 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) multipass compiler

(C) croos 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) Analysing

(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) Mexeme

**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: 40

The 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: A**

Question: 41

Compiler should report the presence of \_\_\_\_\_ in the source program, in translation process.

(A) Text

(B) Errors

(C) Classes

(D) Objects

**Ans: B**

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: 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**

Question: 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

**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 analyser

(C) Lexical analyser

(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: 59

Grammar 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 \_\_\_\_ in 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

**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

(C) Code motion

(D) 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: 71

Programming 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: 73

Language 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) Analysing

(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: 81

Which 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

**Answer: b**

89. 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**

90. 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 mentioned

**Answer: a**

91. An intermediate code form is \_\_\_\_\_\_\_\_\_\_

a) Postfix notation

b) Syntax Trees

c) Three Address code

d) All of the mentioned

**Answer: d**

92. 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**

93. 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**

94. 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**

95. Shift reduce parsers are \_\_\_\_\_\_\_\_\_\_

a) Top down parser

b) Bottom up parser

c) Maybe both

d) None of the mentioned

**Answer: b**

96. 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**

97. What is garbage?

a) Unallocated storage

b) Allocated storage whose access paths are destroyed?

c) Allocated storage

d) Uninitialized storage

**Answer-b**

98. 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**

99. Input to code generator is \_\_\_\_\_\_\_\_\_\_

a) Source code

b) Intermediate code

c) Target code

d) All of the mentioned

**Answer: b**

100. 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**

101. 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**

102. 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**

103. \_\_\_\_\_\_\_\_\_ 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) Modelling

d) None of the mentioned

**Answer: a**

104. \_\_\_\_\_\_\_\_\_\_\_\_\_ is a graph representation of a derivation.

a) The parse tree

b) Oct tree

c) Binary tree

d) None of the mentioned

**Answer: a**

105. 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**

106. Which of these is also known as look-head LR parser?

a) SLR

b) LR

c) LLR

d) None of the mentioned

**Answer: c**

107. 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**

108. 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**

109. 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 and it is still efficient

d) None of the mentioned

**Answer: c**

110. 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**

111. 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**

112. 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**

113. 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**

114. 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**

115. A series of statements explaining how the data is to be processed is called \_\_\_\_\_\_\_\_\_

a) Assembly

b) Machine

c) COBOL

d) Program

**Answer: d**

116. 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

**Answer: a**

117. 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**

118. 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**

119. 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**

120. 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**

121. 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**

123. Which is the most powerful parser?

a) SLR

b) LALR

c) Canonical LR

d) Operator Precedence

**Answer: c**

124. There address code involves \_\_\_\_\_\_\_\_\_\_\_\_\_

a) Exactly 3 address

b) At most Three address

c) No unary operators

d) None of the mentioned

**Answer: b**

125. An intermediate code form is \_\_\_\_\_\_\_\_\_\_\_

a) Postfix Notation

b) Syntax Trees

c) Three address code

d) All of the mentioned

**Answer: d**

126. What is the function of the syntax phase?

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

**Answer: a**

127. 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**

128. 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**

129. 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**

130. 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**