

Seat No.	
----------	--

T.E. (CSE) (Semester - II) Examination, December - 2015**COMPILER CONSTRUCTION (Online)****Sub. Code : 45608****Day and Date : Monday, 07 - 12 - 2015****Total Marks : 50****Time : 04.00 p.m. to 05.00 p.m.**

- Instructions :** 1) All questions are compulsory.
2) All questions carry equal marks.

Multiple choice questions.

- 1) Type checking is normally done during
 - a) lexical analysis.
 - b) syntax analysis
 - c) semantic analysis
 - d) code optimization
- 2) Which of following is not a tool used in compiler
 - a) Parser generator
 - b) Syntax directed translation engine
 - c) Scanner generator
 - d) Static checker
- 3) Which of following analyze the program and prints it in such a way that the structure of program becomes clearly visible.
 - a) Structure editor
 - b) Pretty printer
 - c) Static checker
 - d) Interpreter
- 4) YACC is a
 - a) lexical analyzer generator
 - b) parser generator
 - c) semantic analyzer
 - d) none of the above
- 5) The errors that can be pointed out by the compiler are
 - a) syntax errors
 - b) semantic errors
 - c) logical errors
 - d) Internal errors

P.T.O

- 6) Which of following is used to specify token
- a) Finite Automata
 - b) Regular Expression
 - c) Regular Language
 - d) None of these
- 7) The compiler has _____ phases.
- a) 5
 - b) 6
 - c) 7
 - d) 8
- 8) Lex specification consist of
- a) Declaration
 - b) Rule
 - c) Auxiliary procedure
 - d) All above
- 9) The output of a Lexical analyzer is
- a) Machine code
 - b) Intermediate code
 - c) A stream of tokens
 - d) A parse tree
- 10) Lexical analyzers uses _____ to minimize overhead required to process input character.
- a) buffer-pairs
 - b) sentinels
 - c) parser
 - d) none of the above
- 11) An alternate term for Lexical analyzer is
- a) pattern matcher
 - b) parser
 - c) pushdown automaton
 - d) all of the above
- 12) Given the string abc, the string ac is a
- a) subsequence of abc
 - b) sub-string of abc
 - c) prefix of abc
 - d) suffix of abc
- 13) Input to the LEX is
- a) context free grammar
 - b) regular expressions
 - c) output of the preprocessor
 - d) none of the above

- 14) Lexical analysis is separated from syntax analysis because
- a) lexical analysis is less complex
 - b) optimizing the lexical analyzer provides more benefits than optimizing the syntax analyzer.
 - c) lexical analysis has to perform input/output operations and, therefore, is platform dependent.
 - d) all of the above.
- 15) To speed up the Lexical Analyzer, Two-Buffer scheme use the _____ to mark the buffer end.
- a) Sentinel
 - b) EOF
 - c) Null
 - d) '\0'
- 16) The current token being scanned in the input is frequently referred to as the _____.
- a) Terminal Symbol
 - b) Non-terminal Symbol
 - c) Lookahead Symbol
 - d) Symbol
- 17) Optimizing compiler is _____.
- a) optimized to occupy less space
 - b) optimizes the code
 - c) take less time to execute
 - d) none
- 18) Running time of a program depends on
- a) The way the registers and addressing modes are used
 - b) The order in which computations are performed
 - c) The usage of machine idioms
 - d) All of these
- 19) In labeling algorithm labeling can be done by
- a) Visiting nodes in top-down order
 - b) Visiting nodes in bottom-up order
 - c) Both a and b
 - d) None of the above

- 20) The minimum DFA for $(a \mid b)^*a(a \mid b)^*a$ will have _____ states
- a) 2
 - b) 3
 - c) 4
 - d) 5
- 21) 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
- 22) LR parser is based on
- a) Non-backtracking
 - b) Shift reduce
 - c) Bottom-up
 - d) All above
- 23) A top-down parser generates
- a) Left -most derivation
 - b) right -most derivation
 - c) right-most derivation in reverse
 - d) left-most derivation in reverse
- 24) The most powerful parsing method is
- a) LL(I)
 - b) Canonical LR
 - c) SLR
 - d) LALR
- 25) Which of the following conflicts can not arise in LR parsing
- a) shift-reduce
 - b) reduce -reduce
 - c) shift-shift
 - d) none of the above
- 26) Every node in the flow graph dominates itself
- a) Yes
 - b) No
- 27) The parser obtains a string of tokens from
- a) Syntax Analyzer
 - b) Semantic Analyzer
 - c) Lexical Analyzer
 - d) Code optimization

- 28) _____ is the error-recovery strategy that a parser can employ to recover from a syntactic error.
- a) Left recursion
 - b) Panic mode
 - c) Left factoring
 - d) Handle pruning
- 29) A rightmost derivation in reverse can be obtained by
- a) Left factoring
 - b) Left recursion
 - c) Handle pruning
 - d) Phrase level recovery
- 30) A parse tree showing the values of attributes at each node is called an
- a) simple parse tree
 - b) annotated parse tree
 - c) complex parse tree
 - d) none of these
- 31) A Syntax Directed Definition that uses synthesized attributes is called as
- a) L-attributed definition
 - b) s-attributed definition
 - c) Syntax directed definition
 - d) Inherited attributed definition
- 32) In LR parser, the function _____ takes a state and grammar symbol as arguments and produces a state.
- a) goto
 - b) action
 - c) shift
 - d) accept
- 33) Syntax directed translation can be based on _____
- a) Syntax tree only
 - b) Parse tree only
 - c) Both a & b
 - d) None of the above
- 34) Methods used for evaluating semantic rules are
- a) Rule Based methods
 - b) Oblivious Methods
 - c) Parse tree Methods
 - d) All the above

- 35) The allocation and deallocation of data objects is managed by the _____.
a) operating system package b) compile-time support package
c) run-time support package d) none of the above
- 36) A procedure is _____ if a new activation can begin before an earlier activation of the same procedure has ended.
a) non-recursive b) recursive
c) nested d) none of the above
- 37) In an S-attributed SDD, all attributes are _____.
a) synthesized b) valued
c) Inherited d) L-attributed
- 38) The classes of syntax directed definitions are _____.
a) S-attributed Definitions b) L-attributed Definitions
c) both a & b d) None of the above
- 39) If p & q are procedure activation, then their lifetimes are either _____ or are nested.
a) overlapping b) non-overlapping
c) overloaded d) non-overloaded
- 40) In an activation tree, root represents the activation of the _____.
a) main program b) procedure
c) function d) declaration
- 41) Control stack is used to keep track of Live _____.
a) procedure activation b) function activation
c) program activation d) declaration activation
- 42) The nodes of a syntax tree or DAG are stored in an _____ of record
a) stack b) list
c) array d) none

-